Superintendents to explore the future of ACI

June 17, 1968

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RAILWAY AGE

THE TRANSPORTATION WEEKLY

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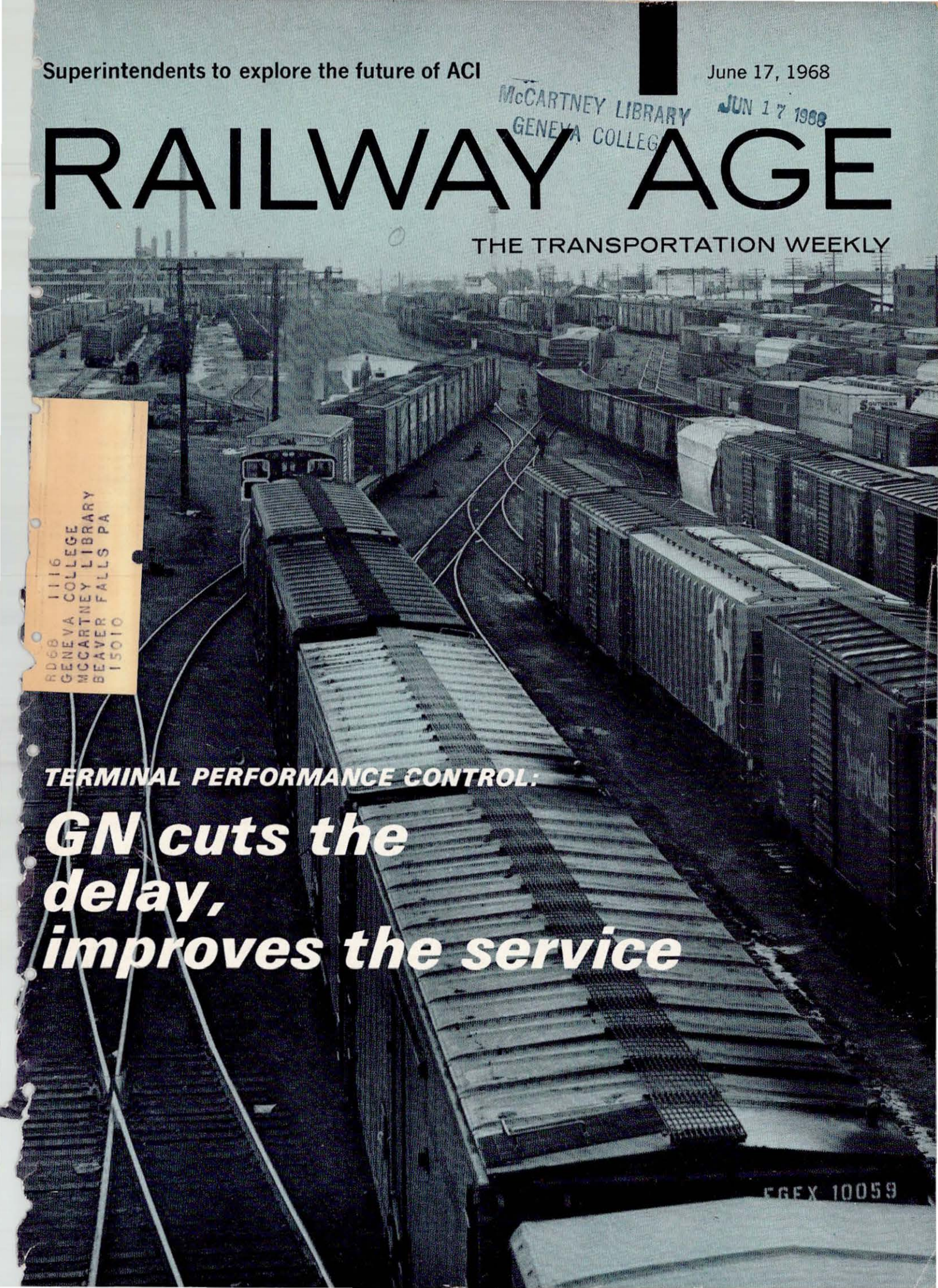


TERMINAL PERFORMANCE CONTROL:

GN cuts the delay, improves the service

This ad is for people who think the cost of everything has gone up.

The current price of Timken® tapered roller bearings for the average freight car is less than 5% of total car cost. In 1949, that figure exceeded 20% of total car cost.

The reasons behind this history of price reduction include railway industry acceptance of our "AP" bearings. And our ten-year-old promise to pass along the savings from lower production costs in the form of lower prices.

We made that promise in 1958 when we invested seven million dollars in our first mechanized production line in Columbus, Ohio. Increasing acceptance of the "AP" bearing encouraged us to invest another five million in a second high production line in 1960, doubling our Columbus plant capacity. And in 1968, our third high production line will further increase capacity.

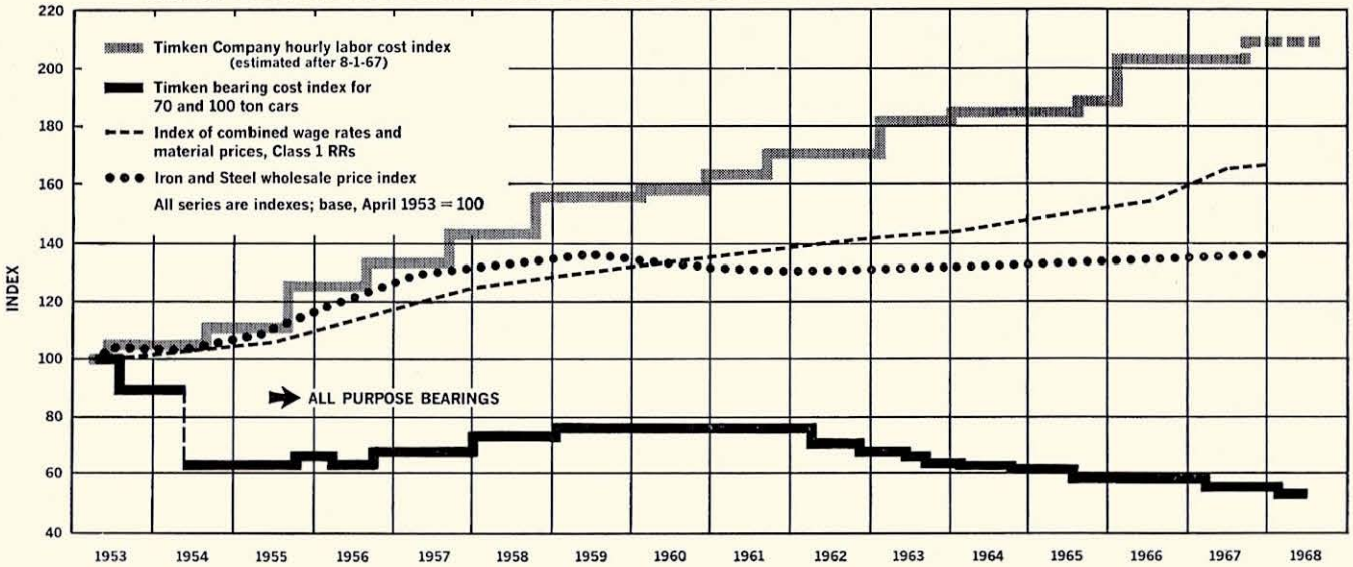
Our nine price reductions on "AP" bearings have saved the railroad industry millions of dollars on their bearing purchases. And prices for Timken "AP" bearing components used for replacements have similarly been reduced to keep your maintenance costs low.

Timken "AP" bearings continue to lead the industry in performance. And we're working to keep it that way.

The Timken Roller Bearing Company, Canton, Ohio.

TIMKEN®
TAPERED ROLLER BEARINGS

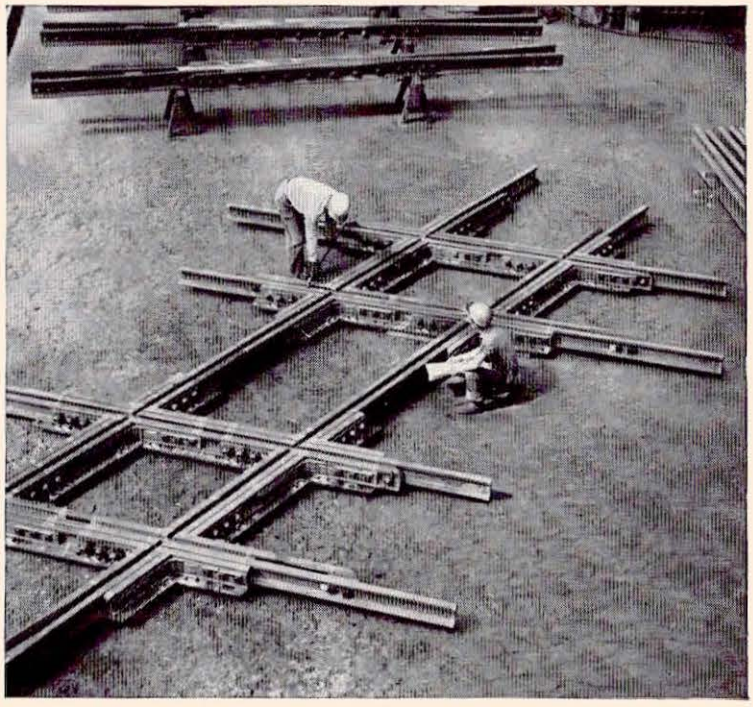
TIMKEN BEARING PRICES ARE LOWER COMPARED TO OTHER RAILROAD COSTS



Circle 14 on coupon page 38

Heat-treated trackwork for long trouble-free service

Here is as fine an example of a railroad crossing as you'll find anywhere. Fabricated of Bethlehem 115 RE rails, it was fully heat-treated by Bethlehem for extra years of service in rugged coal traffic.



Nowhere will you find the equal of Bethlehem's heat-treating equipment and experience, whether for crossings, frogs, switch points, stock rails, or running rails up to 60 ft in length. Our facilities were recently tripled in capacity, to handle the ever-increasing demand for heat-treated track items.

There probably are places on your lines where heat-treated rails or trackwork by Bethlehem would be a good investment. One of our engineers will be glad to talk things over with you at any location you select. You can reach him through any Bethlehem office. Bethlehem Steel Corporation, Bethlehem, Pa.

BETHLEHEM STEEL

...another side of our business

When we deliver our products to you, our interest and responsibilities do not end there. Our representative is a specialist, skilled in the technology of our products. Regardless of your department, he is able to help you with technical advice at any time—your complete satisfaction is his deepest concern. That is why he works for us. Call him when you have a question. He'll respond promptly, courteously, efficiently. The number is 312-427-5051.

CARDWELL WESTINGHOUSE COMPANY

332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604, U.S.A. • TELEPHONE: 312-427-5051

INTERNATIONAL DIVISION SAME ADDRESS

RPI

Circle 3 on coupon page 38

RAILWAY AGE June 17, 1968 • Vol. 164, No. 23

THIS WEEK

TERMINAL PERFORMANCE CONTROL

18 How GN speeds cars through yards

A new weapon in the fight against terminal congestion and delay.

24 Superintendents look sharply at ACI

This week's AARS meeting will cover a host of operating problems.

26 Skilled C&S men are in short supply

Who will handle all that sophisticated C&S equipment?

40 Viewpoint: Public relations—not for the fainthearted

PR work can be dangerous, but it is basic to good railroading.

DEPARTMENTS

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...AND COMING NEXT WEEK

Trailer Train's chief mechanical officer tells why the TTX fleet of some 46,000 flat cars is a laboratory for testing today's flat cars—and their components. Using yesterday's deficiencies as a guide, he says, TTX is constantly on the alert for new ways to cut the costs of car maintenance. Also in the June 24 issue: How C&NW is updating the entire concept of railroad marketing procedures. Like all Freight Traffic issues, this one will go to 10,000 leading shippers, as well as to the regular subscribers.

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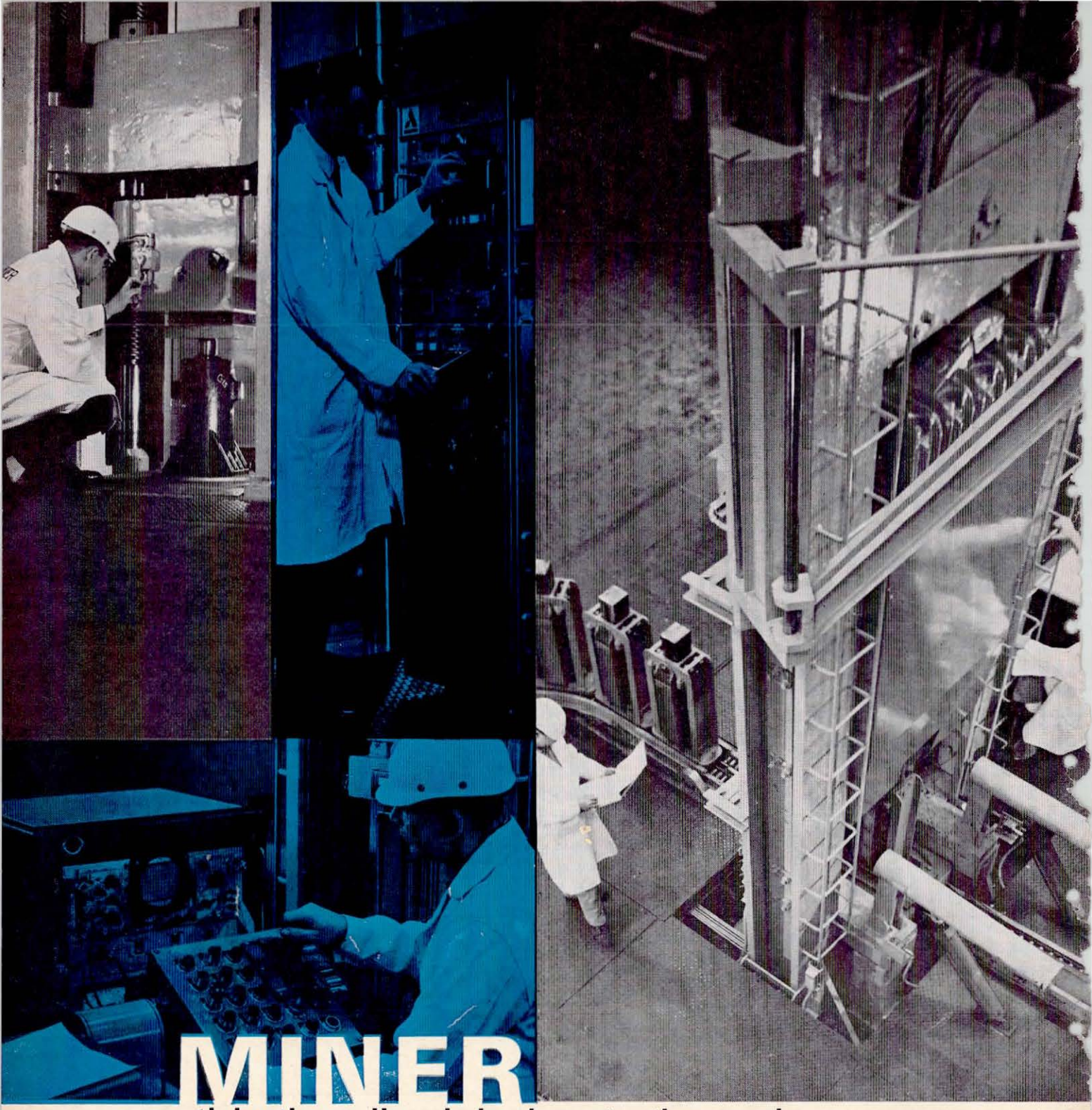

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Miner's dedication to the technical advancement of railroad shock protection is concentrated in the new Engineering, Research, Development and Testing Complex in Chicago. The Miner Complex features the most modern, up-to-date testing and evaluation equipment known to shock protection engineers anywhere. This total capacity to develop shock protection criteria for the reduction of lading damage and maximum car protection is at work daily for the benefit of railroads and shippers world-wide. The objective is to anticipate future advances in rail capacities, loads and operating speeds with energy absorption devices of higher capacities and with maximum built-in reliability. Write for the new brochure containing all the details. **For technical information, contact Miner's Research and Engineering Complex direct at 8700 South Dobson Avenue, Chicago, Illinois 60619 Area Code 312—374-7400.**

W. H. MINER, INC., CHICAGO

International Operations: Washington, D.C.

SHORT AND SIGNIFICANT

REA's railroad owners give up voting control

The 52 railroads that own 96% of the common stock of REA Express have agreed to give full voting control of the company to three voting trustees. The 10-year trust arrangement was devised to "consolidate and centralize the management of REA's affairs in the hands of independent voting trustees so that forceful and prompt action can be taken to eliminate current operating losses and put the enterprise on a profitable basis," REA said.

Erie Lackawanna to sell Hudson River site to Seatrain

The Erie Lackawanna's old Weehawken Terminal property — some 80-acres facing on the Hudson River across from Manhattan, will be sold to Seatrain Lines, Inc., for $2.1 million. Seatrain is expected to spend about $2 million on the property over the next few years to develop it for container ship operations, with annual capacity of 7,800 container units.

RPI backs tax increase, spending-cut package

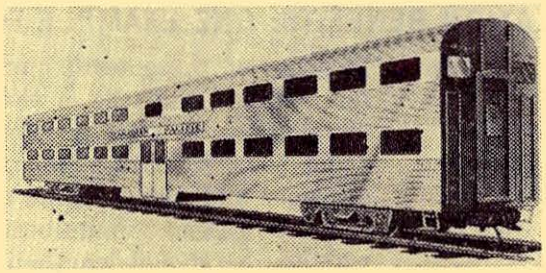
The Railway Progress Institute last week urged Congress to approve the 10% income tax surcharge, coupled with a $6 billion cut in expenditures. It supported the fiscal package as a measure to combat inflation and help bring about lower interest rates so that railroads will be better able to resume buying capital equipment from the suppliers. RPI President Nils Lennartson explained that members of the Institute's governing board had noted that high interest rates "are a deterrent to financing badly-needed new capital equipment by the railroads, whose rate of return on investment last year was only 2.45%."

Paperwork to be reduced for car repairs

Simplification of AAR billing procedures for repairs on interchange freight cars is the assignment of a special task force organized by the AAR Mechanical and Accounting Divisions. Target date for completion of the study is next May. While previously the Interchange Rules have been the sole jurisdiction of the Mechanical Division, the increasing use of computers and data processing in the railroad industry has now involved accounting groups. Study of the proposed simplification was authorized by the AAR board of directors after its recommendation by the Mechanical Division's General Committee. It is probable that the inspection and repair regulations covering interchange cars would be separated from the costing and billing procedures for this work; presently they are combined in Interchange Rules.

William J. Ronan is elected president of transit organization

Dr. William J. Ronan, chairman of New York's Metropolitan Transportation Authority, was elected president of the Institute for Rapid Transit at the IRT's annual meeting last week in Toronto. Dr. Ronan succeeds George L. DeMent, chairman of the Chicago Transit Board, in the post. In an additional move, IRT officials announced intention to move the association's headquarters to Washington, D.C. from Chicago.



New commuter cars ordered by Canadian Pacific

Push-pull, double-deck commuter service will come to Canada next summer when Canadian Pacific introduces some new equipment on its Montreal suburban Lakeshore run. CP has placed a $2.8-million order for nine of the double-deck cars (photo) with Canadian Vickers. The air-conditioned, stainless-steel cars will be similar to those in service on U.S. railroads.

MONDAY MORNING REPORT

A STIMULATION TO GOOD DECISION-MAKING

By almost any measure, operations simulation stacks up as one of the most valuable new tools available to railroad planners—not just in improving efficiency of operations, but also in guiding management to wise investment decisions. Simulation, on the scale required in the railroad industry, really became practical with introduction of third-generation computer technology. And development is advancing fast.

A WEEK OF OPERATIONS—IN MINUTES' TIME

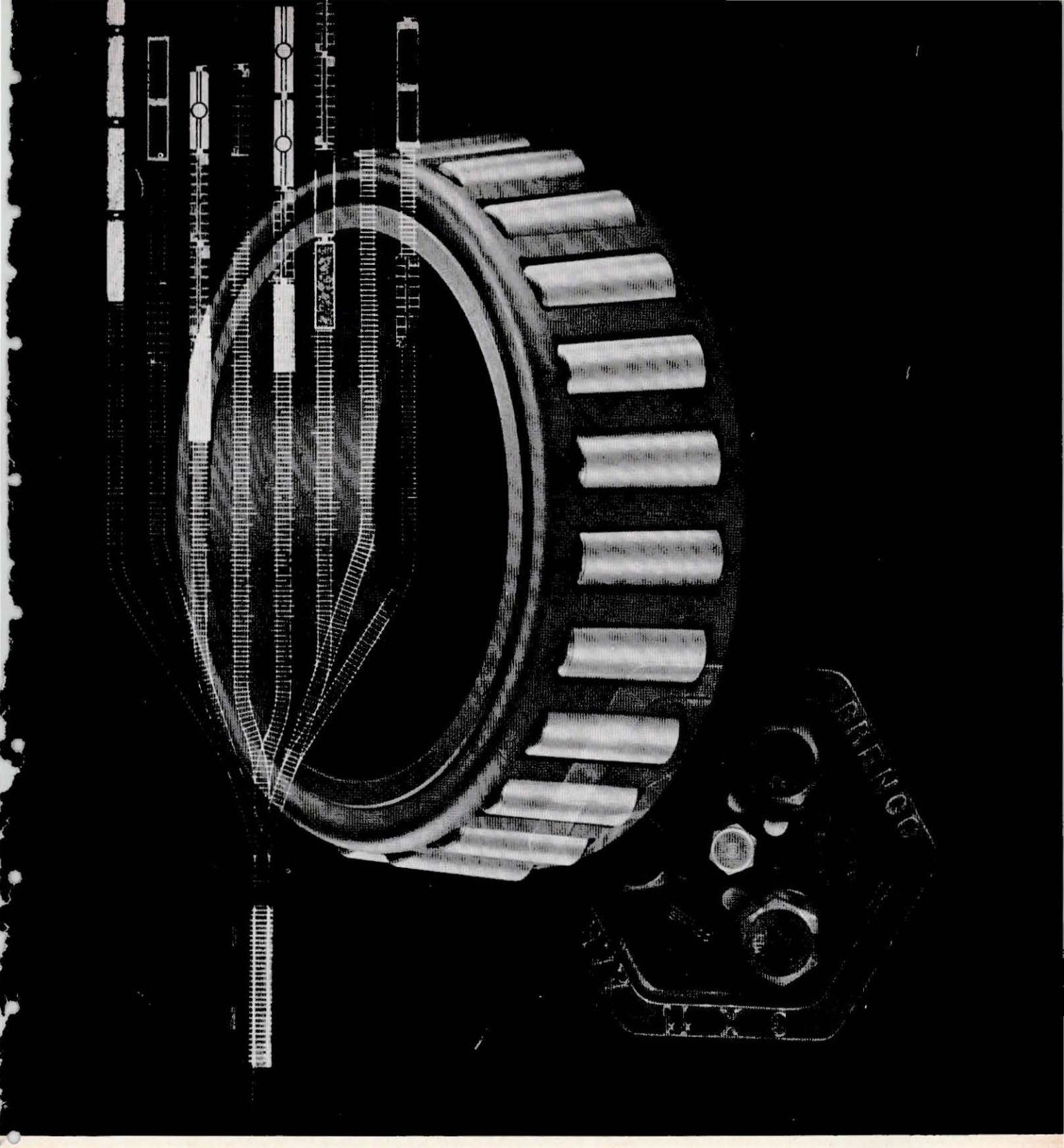
Canadian National, Canadian Pacific, Frisco, Southern and Santa Fe, to name a few, have made significant use of these new techniques. Much pioneering work has been done—as, for instance, in the employment of the train performance calculator (TPC) and the single-track capacity analyzer (STCA). TPC solves mathematical equations for movement of a train over a section of track, taking into account grades, curvature, speed restrictions, locomotive horsepower, braking characteristics, train resistance, fuel consumption. STCA does its work with the movements of all trains on a given section of line—simulating a dispatcher's control of traffic in CTC territory, for example. Simulation speed borders on the fantastic. Today's computer equipment can plot 20 trains over 150 miles of line in about 10 minutes. One road has been able to run simulations of an entire week's train operations in about 90 minutes of computer time.

SIMULATION BENEFITS: ONE EXAMPLE FROM THE SIGNAL DEPARTMENT . . .

Benefits of these techniques are wide-ranging—and specific. Take, for instance, the case of the signal engineer studying proposed new installations in CTC territory. Cost of signaling a siding averages about $50,000. With simulation, the engineer can know—before final decisions and commitments are made—that the siding will be located so as to draw maximum benefits from the CTC system. He can know whether he should lengthen blocks or add signal aspects to provide proper braking distances for high-speed freight-train operation. Simulation print-out can give him vital data on train configuration and capability, on running time, delay time and meet or pass situations where one train must take the siding.

. . . WHICH COULD PRODUCE STILL GREATER ADVANTAGES

Then, take simulation and the signal department one step farther—to computer control of CTC systems, as feedback from the CTC machine (train location, switch and signal position data) is added, to close the control loop. Benefits could be enormous, in terms of efficiency and return on investment. And this is just one direction operations simulation today is pointing.



In this new era in railroading, ruggedness counts...

Brenco *crown-taper* roller bearings are the most modern of all.

BRENCO, INCORPORATED
PETERSBURG, VIRGINIA

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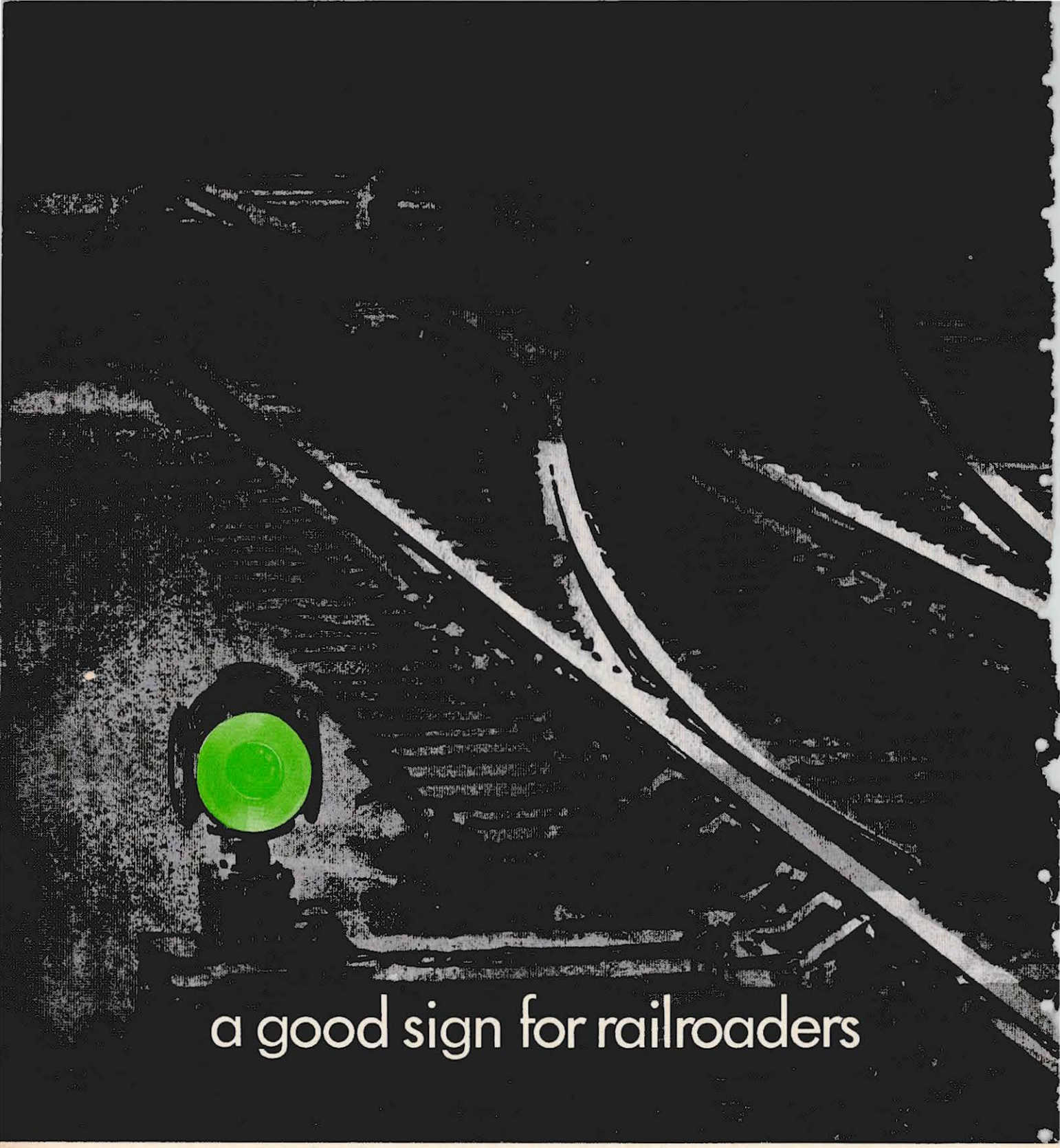


a good sign for railroaders

Whether it's in the switching yard or on an open stretch of track, a green light on a switch spells out a good sign for any railroader. And the familiar Edgewater (E) on wrought steel wheels tells a railroader he's equipped with the most dependable wheels for his rolling stock.

Edgewater wrought steel wheels give you extra service because they're made by a highly developed forging and rolling technique. The metal's tough and dense, providing the all-important stamina to withstand today's heavier loads and higher speeds. Edgewater Corporation, P. O. Box 478, Pittsburgh, Pa. 15230.

when you want the highest quality steel wheels, rely on this sign

Circle 6 on coupon page 38

RAILWAY AGE
THE TRANSPORTATION WEEKLY
June 17, 1968

WEEK AT A GLANCE

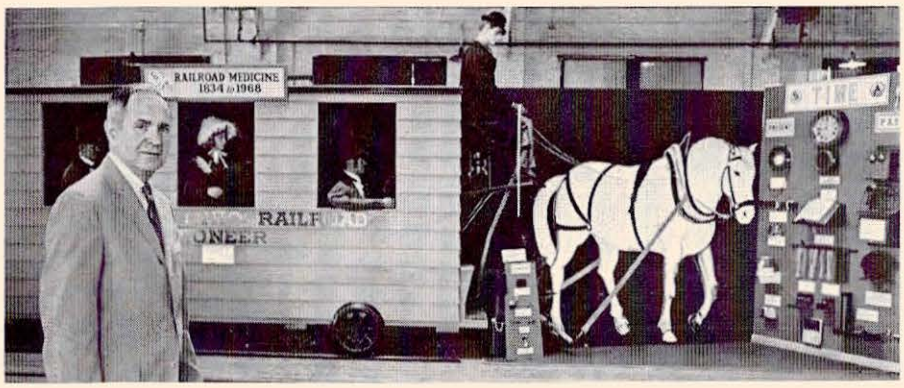
ICC learns names of road owners in RI case

The ICC found out last week who really owns the five railroads involved in the Rock Island case. But, with one exception, ICC isn't talking.

In a hearing at which subpoenaed reports were recorded, Washington Mutual Investors was named as the owner of 120,000 Union Pacific shares, 100,000 Rio Grande shares, 70,000 Santa Fe shares, and 70,000 Southern Pacific shares. WMI's stock is held by Hold & Company, a phantom firm set up by Riggs National Bank of Washington, according to one of the reports.

Other financial firms subpoenaed were Cudd & Company, which is actually Chase Manhattan; Sigler & Company, Manufacturer's Hanover Trust; Merrill, Lynch, Pierce, Fenner & Smith; and Brown Bros. Harriman.

The other railroad involved is the North Western. Nathan Klitenic, ICC examiner, asked the financial firms to reveal the names and addresses of each beneficial or actual owner of 1,000 shares of the five railroads' stock. He also asked for the number of shares of stock voted by the firms for each road and for the name of each beneficial owner of 5,000 or more of these shares.



Historical look at railroad medicine

Doctors at the annual convention of the American Medical Association in San Francisco this week (June 16-20) will get a chance to bone up on the history of railroad medicine. Dr. Isadore Kaplan (photo), medical director for Chesapeake & Ohio/Baltimore & Ohio, has put together a box car full of antique medical items in a display that traces the history of railroad medicine from 1834, when the first physician was employed by B&O, the nation's first common carrier. Focal point of the exhibit is a full-scale replica of the "Pioneer," the first railroad passenger car used in revenue service—and the first to which a physician was assigned for the convenience of passengers. B&O's Mount Clare Shops in Baltimore built the original Pioneer in 1830 and the reproduction being shown at the AMA meeting.

C&NW hopes to increase fares, not train-offs

Rather than take off more intercity passenger trains, Chicago & North Western would raise most intercity fares by 25%, according to a proposal filed with Michigan, Wisconsin and Illinois Commerce Commissions last week. The proposal was filed earlier with the ICC. Chicago-Milwaukee fares would go up 10%, under the plan that's set to start July 10.

Also, a pair of Chicago-Ashland, Wis., trains would be limited to running in the vacation months, June, July and August. Other times, the trains would run just to Green Bay, where a bus would take passengers for Ashland.

H. A. Lenske, C&NW commuter and passenger service director, said the proposal "will not only materially reduce the chronic and increasing deficits incurred by our intercity trains, but will substantially strengthen our ability to maintain this service."

Chicago roads get merger reaffirmed

As of June 12, the Chicago & North Western and the Chicago Great Western are free to merge. The approval for consolidation was granted last week by the ICC as it reaffirmed—with modifications—its prior decision on the merger.

The amalgamation of the two roads was originally approved by the Commission on April 20, 1967, but the Soo Line appealed the decision to a federal court and the proceeding was remanded for reconsideration. Soo has since withdrawn its opposition after reaching agreement with C&NW and CGW on conditions giving Soo better protection against traffic diversion.

The two railroads have planned to merge on the first day of a month, but the specific date has not been set.

GUS WELTY

LINES ON LABOR

HALTINGLY, rail management and the labor organizations are making some progress with 1968 wage-rules cases. At this point, a handful of unions have signed up. They've received settlements that have to be described as generous. They've agreed, however, to a moratorium on new demands through 1969, and they've accepted a no-strike clause also running to Jan. 1, 1970. Numbered among the unions in the fold are two of the biggest, the Brotherhood of Railway and Airline Clerks and Brotherhood of Maintenance of Way Employees.

WHEN BRAC AGREED to a settlement, there was perhaps a natural tendency to believe the domino theory would start to work. After all, Les Dennis' Clerks organization is the largest of all the brotherhoods. Its decisions have to carry weight. They may still, among the non-ops, at least.

LITTLE PROGRESS has been noted thus far in dealing with the Brotherhood of Locomotive Firemen & Enginemen. Charles Luna, president of the Brotherhood of Railroad Trainmen, is conditioning the membership for appointment of an emergency board. Last month, the Brotherhood of Locomotive Engineers finally came in with its wage demands, calling for a 15% pay increase, a 10% differential for working without a fireman and a 10% differential for using locomotives equipped with radio.

NOT TOO LONG AGO, there was a rather privately-expressed optimism that the BRT would agree to a pattern settlement. According to reports at the time, the parties weren't too far apart. Luna, however, now declares that "refusal of the carriers to come even close to the BRT's contract requests has forced wage-rules negotiations out of the direct-talk class and moved them to another level."

AS USUAL, it's ironic that labor is demanding all manner of goodies from an industry it just can't bring itself to support. Two items come to mind — and coincidentally, they were carried in the same issue of "Trainman News" which ran Luna's comments on the wage case. One item, borrowing from Rowan and Martin's TV "Laugh-In," calls it "verrrry interesting" that DOT isn't opposing the railroad rate-increase proposal. Another shortie throws a barb at Santa Fe's "Super C" operation, with the observation that "so far it has gotten more attention than business. . . . Maybe the carrier needs a salesman." It is, really, to wonder. But as Confucius might have said, "man who want to milk cow cannot kick cow in tail at same time."

Human relations: A computer-age need

Will the railroads' growing roster of human-computer teams be winners? Yes, if the humans involved make the effort to develop winning relationships among themselves. This was the word from Thomas M. Goodfellow, AAR president, last week.

Speaking at the June 11 luncheon of the AAR Accounting Division's annual meeting in Chicago, Goodfellow said: "Men and machines can work in harmony—but only if the various specialists sitting in their departmental 'islands of power' are willing to build bridges from one island to another." The bridges depend on good communications, which depend on understanding, he added.

The need for teamwork led a list of admonitions. Others included: Machines must not dictate to men so the human element becomes just a spinoff; there are bugs in all new systems, and they take time to work out; wild claims must be avoided for new things like ACI and TRAIN lest shippers expect too much too soon; new training methods must be developed for new people.

Before his talk, Goodfellow confirmed a report that the AAR is undergoing an efficiency study by the WOFAC Corporation, a management science and service firm based in Moorestown, N.J. The project will be completed in time for AAR's move into new Washington offices in October. Operations in Washington and Chicago are being studied. "We want to see where we're strongest," Goodfellow said.

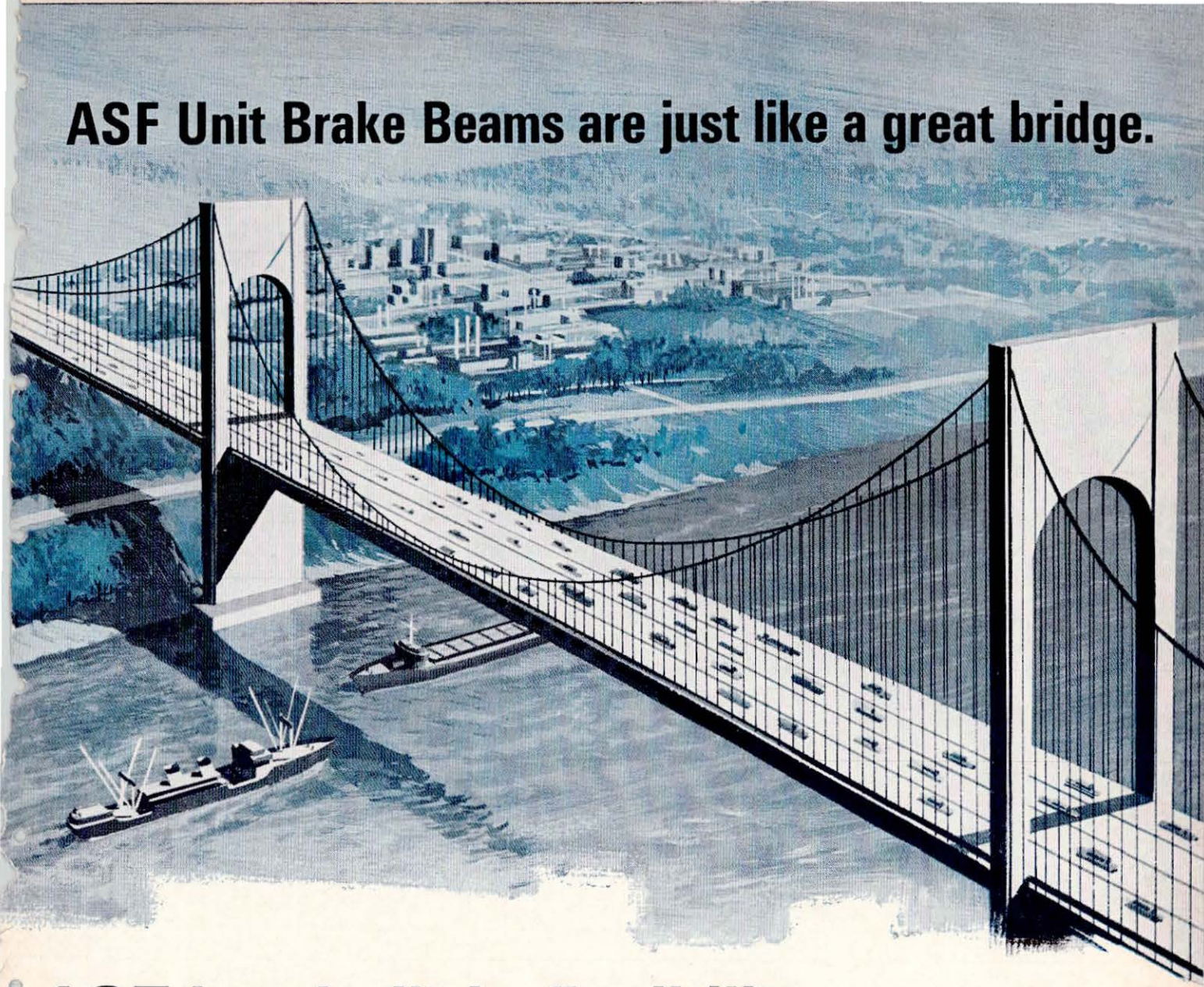
A place for rails in the cities?

Rails came out on the short end of Secretary of Transportation Allan S. Boyd's address to the Conference of Mayors in Chicago last week.

In discussing the relationship of transportation and the problems of American cities, Boyd gave only brief mention to rail transit.

"A good place to start on this job, I think, is to recognize that in most American cities for the foreseeable future, the dominant form of transportation will continue to be rubber over roads," Boyd said. And, he added, "reality, of course, also requires that we recognize the rather pathetic state and severe limitations of existing alternatives to the automobile."

ASF Unit Brake Beams are just like a great bridge.

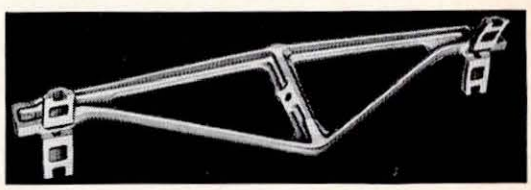


ASF has built-in flexibility and resists taking a permanent set.

ASF makes brake beams that stand up under high brake pressures and heavy loads, resist bending and distortion. ASF's one-piece construction gives built-in strength and safety others can't match.

Your ASF representative would like to show you our track record on performance. Why not see him, or write to American Steel Foundries, 1005 Prudential Plaza, Chicago, Illinois 60601.

IN CANADA: INTERNATIONAL EQUIPMENT COMPANY, LTD., MONTREAL, QUEBEC.



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Circle 7 on coupon page 38

THE ROCK ISLAND LINE

The origin of this famous American folk ballad goes back deeply into the roots of our rural South. Some say Confederate troops sang it while on the march. The great Negro ballad singer, Leadbetter, is generally credited, however, with making "Rock Island Line" a permanent part of Americana.

There's room for me
There's room for you
Plenty of room for the Rock Island crew
Rock Island Line is a mighty good road
Rock Island Line is the road to ride
Rock Island Line is a mighty good road
If you wanna ride it
Gotta stride it like you're flyin'

Get your ticket at the station
On the Rock Island Line

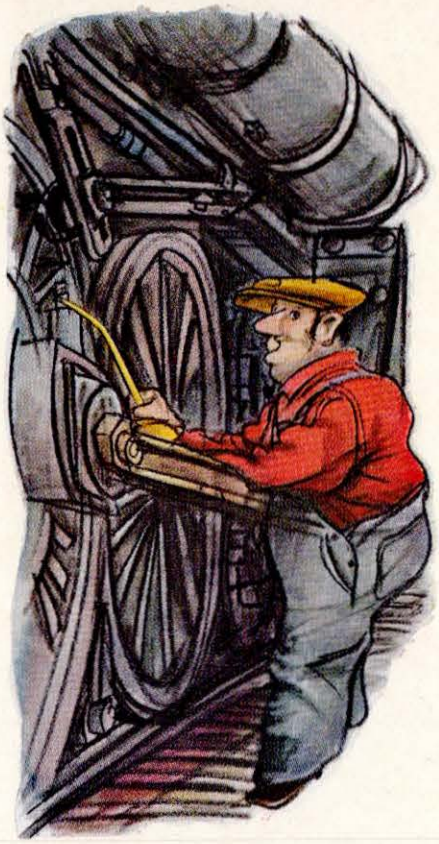
Engine in front
Caboose in the back
Goes so fast most leaves the track
Well now the Rock Island Line
It is a mighty good road
Rock Island Line
It is the road to ride
Rock Island Line
It is a mighty good road
And if you wanna ride it
Gotta stride it like you're flyin'
Get your ticket at the station
On the Rock Island Line

This train goes flyin' on by now
This train
This train goes flyin' on by now
This train
This train goes flyin' on by now
Whistle and smoke
Gonna fill the sky now
This train goes flyin' on by now
This train

Waa Waa Waa Waa Waa . . .
Now the Rock Island Line
It is a mighty good road
Rock Island Line
It is the road to ride
Rock Island Line
It is a mighty good road
And if you wanna ride it
Gotta stride it like you're flyin'
Get your ticket at the station
On the Rock Island Line

Rock Island

Get your ticket at the station
On the Rock Island Line



Railroading has seen many changes for the better since "Rock Island Line" first whistled its way into the American heart. New Departure-Hyatt is proud to have played its part in this saga from steam and smoke and hotboxes to the sleek Diesels and dependable NDH Taper Freight Bearings of today.

The romance of our railroad past will always be remembered in songs like this. It's the breakdowns and downtime we're happy to forget. And we'll forget them even more in the future—thanks to important advances in bearing design and manufacture that NDH engineers are working on right now!

If you'd like a full-color reprint of this advertisement, we'll be happy to send it to you, upon request. It will carry no commercial message, so you can frame it for your office.

GM
MARK OF EXCELLENCE

NEW DEPARTURE-HYATT BEARINGS
Division of General Motors Corporation; Sandusky, Ohio 44871

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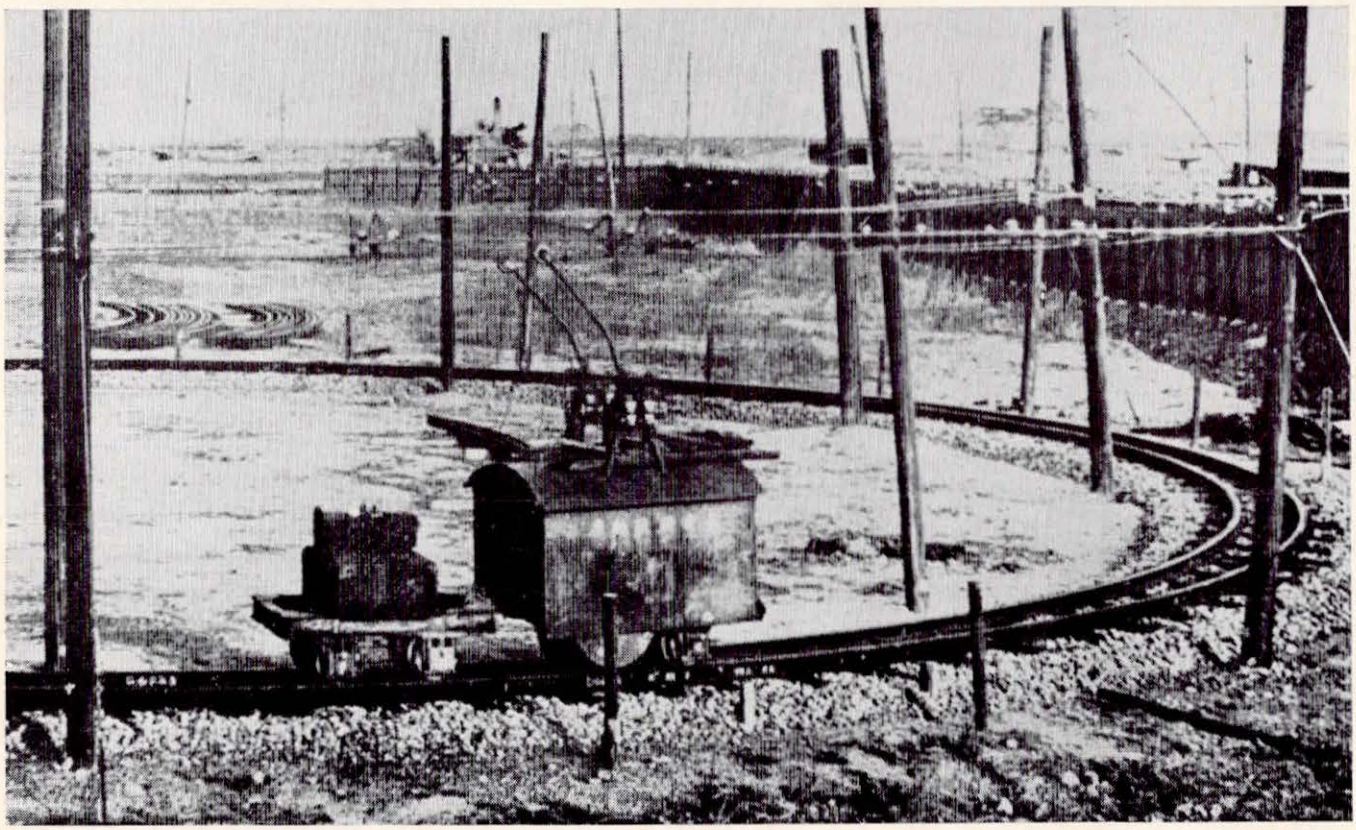
Rock Island Line—Copyright, 1961, Bigareff Music, Inc., New York, New York.

Circle 8 on coupon page 38

Sumitomo is the first foreign rolling stock parts maker to get AAR approval.

Is a history of original research the reason?



This photograph is 40 years old.
We took it at our Osaka Works in 1928 during a ten-year study of the abrasion of rails and rolling stock, in collaboration with the Japanese Government Railways. And presented the results of the research at the 2nd International Rail Assembly in Zurich in 1932.
The unusual thing is that today these results are still regarded as definitive.
Nobody else has ever had to do this kind of research.
Maybe nobody else ever will.

Original rolling stock research characterizes our long history of manufacture. Our current work, for instance, will show us how to build wheels and axles for a new Japanese National Railways super-express expected to operate at speeds up to 160 mph. For this train, wheel tests are being conducted at speeds up to 200 mph.
And we built the testing machine.

There's a multitude of ways you can benefit from our research, because we make more rolling stock parts than any other steelmaker.
In the world's largest (and most economical) wheel-making mill.
Our rolling stock parts line is so complete that you may never have to turn to another supplier.
And the quality of these products is unquestioned. That's another reason why we're the first foreign rolling stock parts maker to get Association of American Railroads approval, for wheels, axles and wheel sets.
We'll tell you more if you write.

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Wm. B. Berrington
GTW-CN

Donald D. Strench
L&N

PEOPLE

CLINCHFIELD.—**T. D. Moore, Jr.** named general manager, to succeed **Chester R. Lapeza,** who becomes president and general manager, **Georgia Railroad, Atlanta & West Point** and **Western Railway of Alabama.** Mr. Moore was formerly associated with the **Seaboard Coast Line.**

GEORGIA RAILROAD, ATLANTA & WEST POINT, WESTERN RAILWAY OF ALABAMA.—**Chester R. Lapeza** appointed president and general manager, succeeding **Donald D. Strench,** who has become general manager, **Louisville & Nashville.** Mr. Lapeza was formerly general manager, **Clinchfield.**

GRAND TRUNK WESTERN-CANADIAN NATIONAL.—**William B. Berrington** appointed manager, passenger sales and services, Chicago, to succeed **John L. Bickley,** retired passenger traffic manager (RA, May 27, p. 71). **E. R. Elliott** named assistant manager-passenger sales and services, Detroit, and **Merton G. Howe,** assistant manager-passenger sales and services, Chicago. **Charles L. Nelson** named administrative assistant, Chicago.

LOUISVILLE & NASHVILLE.—**Donald D. Strench** appointed to the newly created position of general manager. Mr. Strench was formerly president and general manager, **Georgia Railroad, Atlanta & West Point** and **Western Railway of Alabama.**

John A. Hughes, Jr., passenger representative, Birmingham, Ala., named district passenger agent there, to replace **J. D. Lee,** retired.

Allen D. Congdon, administrative assistant, appointed assistant treasurer, with headquarters as before at New York.

PORT AUTHORITY TRANS-HUDSON.—**Thomas Sorensen,** acting superintendent of way and power, New York, appointed superintendent of way and power.

RARITAN RIVER.—**Richard B. Wachenfeld** elected president, succeeding **P. M. Shoemaker,** resigned. **R. G. Kipp** elected vice president and general manager.

UNION PACIFIC.—**Porter V. Webb,** assistant controller, UP, New York, and vice president, **Pacific Fruit Express Co.,** has retired after 48 years of railroad service.

David E. Lefebvre named general traffic agent, Lewiston, Idaho.

OBITUARY

Edward S. French, 84, board chairman, **Maine Central,** and former president and chairman, **Boston & Maine,** died June 9 in Springfield, Vt.

Circle 13 on coupon page 38 ►

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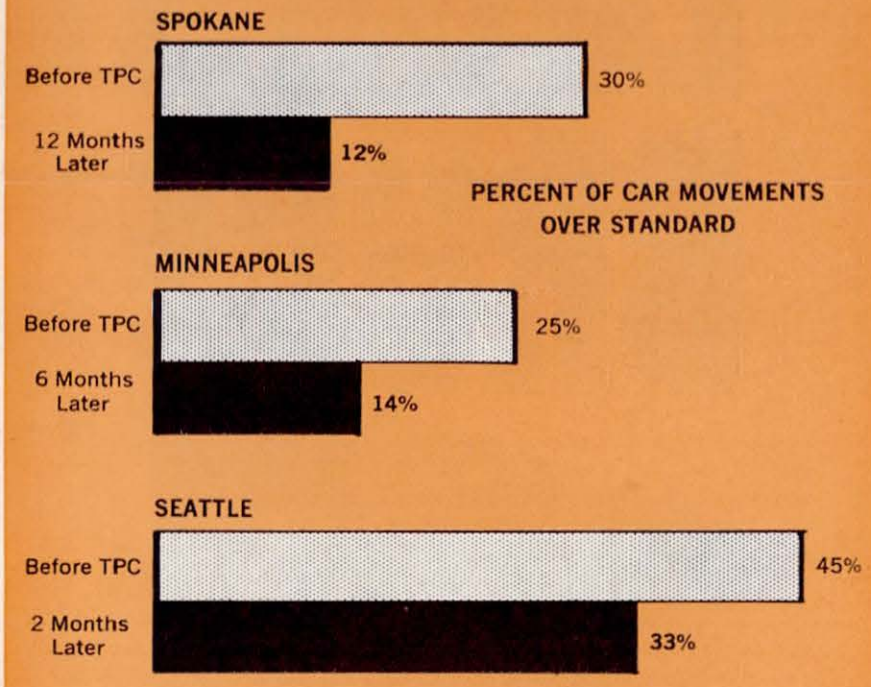
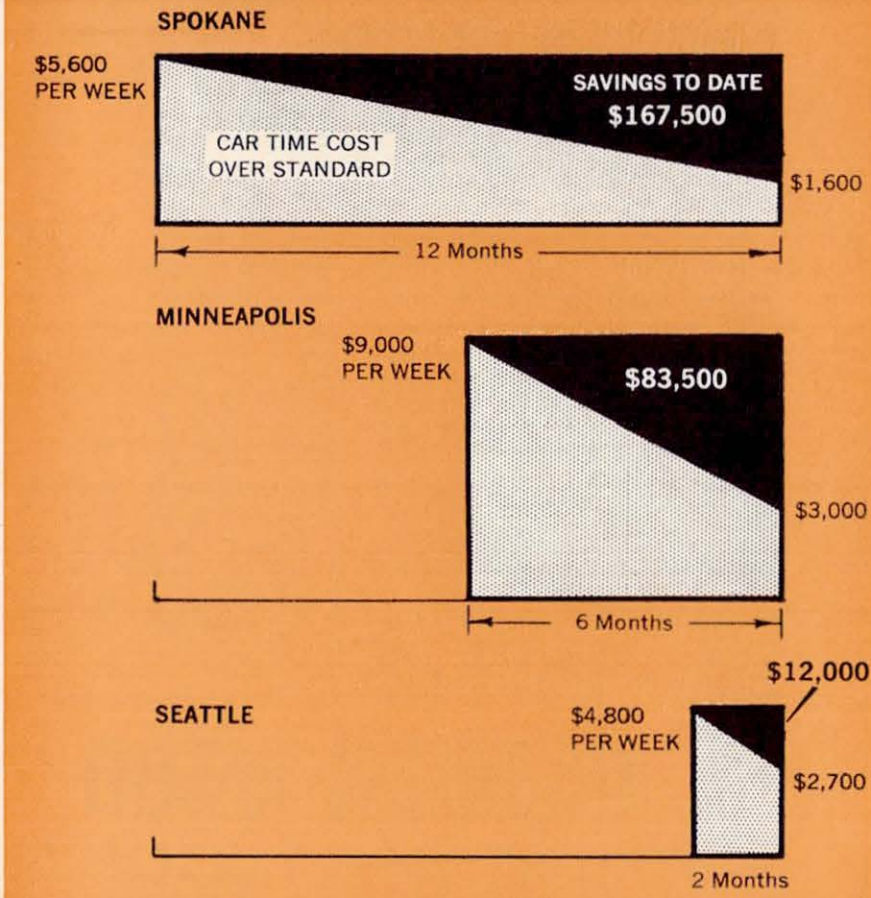
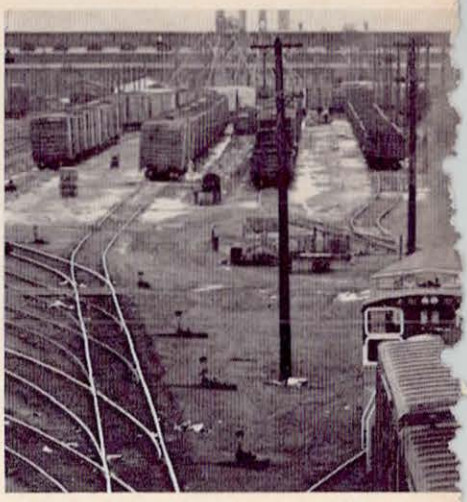
TPC has improved customer service at three major terminals...



TPC has sharply reduced car time spent in terminals...





How GN

Terminal Performance Control has given the road and its customers a potent weapon in the never-ending fight against terminal congestion

What rail management tool will do all these things at once: Cut down terminal congestion, speed up shipper-customer moves of individual cars, lower per-diem costs, and form a basis for a strong market program?

To answer that, ask the question another way:

What good is an old freight yard with 60 cars stalled on the wash track each day, with so great a clutter that empty cars take two days to crawl through, and with men so swamped by shippers' gripes that they hardly have time to look for shippers' lost loads?

That's the way it was at Great Northern's Hillyard terminal near Spokane one year ago. GN decided then that Hillyard could serve as a test-tube for a new Terminal Performance Control system. Now, the washout backlog is washed out, the yard-time of empties is less than 19 hours, and customers' complaints are as hard to find as their carloads once were.

Hillyard is free of its dotage. And that same rescue operation now is pumping health into eight other GN terminals. It works by measuring the cost of a car's time in a yard according to standards drawn for each car-move in each yard. Based on this measure, the following results are reported for three major GN terminals:

peeds cars through yards

—At Hillyard there is a 12-month saving of $167,500 for a drop of over-standard car-moves to 12% from 30%.

—At Minneapolis-St. Paul, there is a six-month saving of $83,500 for an over-standard decrease to 12% from 25%.

—At Seattle, there is a two-month saving of $12,000 for a slow-move drop to 33% from 45%.

● **July 1: Tenth TPC.** The tenth TPC system on the GN is set to start work at Grand Forks, N.D., July 1, according to Ronald L. Aase, manager —terminal systems, operating department. The most recent TPC installation was made at Superior, Wis., June 5. Other terminals with the system are Whitefish, Mont., Willmar and St. Cloud, Minn., and Tacoma and Everett, Wash. Statistics for these aren't available yet, but results are expected to match those of the three big yards, Aase says.

With Grand Forks, 67% of GN switching operations will be under TPC measurement. A year from now, the 20 biggest terminals will have the system. Then, GN marketing men can really "boast that the speed of freight-car movement between shipper and consignee has improved as much as the speed of our freight trains," Aase says.

Mention of the car-speed/train-speed relationship points to one major reason behind TPC's development. From 1952 to 1967, the average speed of GN Spokane-Minneapolis freight trains rose by more than 30%. However, there was a mini-rise in the speed of Spokane shipper/Minneapolis-customer car-movement. GN managers realized there was just one culprit—terminal congestion. They also realized that there would be two major elements in the attack on congestion—assignment of responsibility for terminal operations to one man, the terminal manager, and a measure of terminal performance in terms of dollars and cents, car-time cost over standard.

● **Hillyard: Good example.** For a couple of reasons, Hillyard is a good example of how TPC works. First, it was chosen as the pilot site because it was GN's thickest traffic-plug. Second, Dave Nelson, the Hillyard terminal manager, was one of the system's designers. As a former trainmaster in the long-time trouble-spot, Nelson can take great satisfaction in the uprooting of the congestion that had pestered Hillyard for as long as he can remember: "We always said that if you wanted to lose a car on the GN, the place to do it right was at Hillyard. And our customers knew what we were talking about," Nelson says.

He became part of a team that included Paul F. Cruikshank, then division superintendent at Spokane and now assistant vice president—market planning; Thomas J. Lamphier, then assistant to John L. Robson, operations vice president, and now administration vice president; and Ronald Aase, also an assistant to Robson then.

They came up with a system that not only cleared Hillyard, but also:

—Raised car distribution time to 24 hours a day from 10 hours.

—Led to Nelson's insistence on interchange with other roads once every crew-shift rather than once each day.

—Provided a particular day's cost-information on the following day rather than six weeks later.

—Avoided major expenses for new personnel or for equipment, such as a computer.

—Added the equivalent of 200 cars to GN's fleet through the saving of 62,000 car-days annually: 62,000 cars move one day sooner than under former methods.

—Helped GN personnel find track they "didn't know they had."

—Caused a major Spokane shipper to revise his own schedules because an entire day was cut from the timetable out of Spokane.

● **Customer relations improve.** Important as the savings in per-diem and operating costs are, Mal M. Scanlan, GN marketing vice president, takes special pleasure in another result—improved customer relations:

"Most shippers rate consistent and dependable service high on their list of requirements, and this is what Hillyard can give them today. In addition, Hillyard is an important center for distribution of empty cars to shippers over a wide area. The new plan is speeding up delivery of empties to customers' loading tracks. When a shipper gets a rush order, he can expect to get a suitable empty spotted quickly. All these things add up to better service for our customers, and we confidently expect more benefits to GN in the long run, especially when the improvement in car distribution has become system-side."

Although Hillyard was the first to get TPC, it will be the last to get computerized data processing. The reason is that the Hillyard system was designed to work without a computer, and there is no immediate need to change that, Aase says. Also, when the

Hillyard system started operating, GN's computer centers in Minneapolis and St. Paul weren't completed. Now, however, all the other terminals with TPC are served in Minneapolis by an IBM 1130 or in St. Paul by an IBM 360 or a UNIVAC III. Eventually, all GN's TPC data processing will be done in St. Paul.

● **The TPC matrix.** The formula for TPC at Hillyard is wrapped in a blue-covered binder kept in the division superintendent's office in Spokane. Although it contains standards tailor-made for Hillyard, the general construction of those standards is the same for any terminal. And underlying the entire standard-oriented system is a matrix that occupies a prominent spot up front in the blue binder. It's a matrix of 25 measurement points in the Hillyard terminal. These are places where responsibility for car-handling changes, such as the end of a rip track, an interchange with another railroad, or the start of an industrial track. These are origin or completion points for car moves within the terminal.

Using this matrix, GN determined 300 movements, or possible combinations of measurement points. For each movement, the road set a time-standard representing the outer limits of good performance. With the help of data-processing equipment, the actual car-movement times are compared with the standards. Each 24 hours over standard is multiplied by three (GN's average per-diem cost is $3.08 a day) to get a one-figure cost summary of terminal performance. The resulting figure is called the car-time-cost-over-standard (CTCOS). It directly shows the dollar potential of tighter control and the dollar significance of changes in operations.

● **Four reports for managers.** That dollar-tinted picture is relayed in the form of four basic reports—the daily summary of terminal performance, the performance-by-movement report, the detail list of cars over standard, and the ongoing movement or work-planning report. All these are summarized into monthly reports for the operations vice president and other officers.

How do these reports fit the managerial function? "You can get all the reports you want, but it's what you do with them that counts. And we do the most important thing with them: We identify the areas that need improvement," Nelson says.

That identification comes every Tuesday morning when Nelson analyzes the reports from the previous week. He compares the week's performance with targets set on the previous Tuesday, plans further corrective actions that may be needed, chooses new movements to work on (the ones accounting for highest over-standard costs), plans specific corrective actions and responsibilities, determines the coming week's targets in percents and dollars, and writes out his plan on a special Weekly Improvement Program form.

"We picked Tuesday for the start of the weekly improvement program for a special reason. We're a day away from the West Coast, where the busy day is Saturday. Our busy day is Sunday, and Monday becomes our slack day and cleanup day. That way Tuesday becomes the first day of the week for us. Our Tuesday morning meeting covers the entire week from 12:01 a.m. of last Tuesday to 12:01 a.m. of this one," Nelson explains.

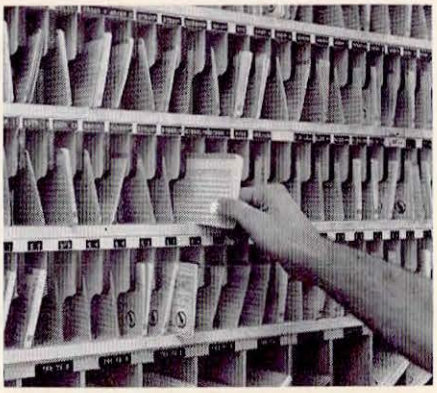
After working out his plan, Nelson calls in the general yardmaster and his assistants, the yard office supervisor and other personnel considered pertinent to a particular problem. In this meeting, Nelson repeats the procedure he went through privately. Each person gets a copy of the weekly improvement plan, as does the division superintendent, who may or may not have been present.

● **"Define responsibility."** From Nelson's office the message is funneled through the superintendent to the trainmasters and through the general yardmaster and his assistants to all the yardmasters. And the message is always the same: "Review, outline, define responsibility."

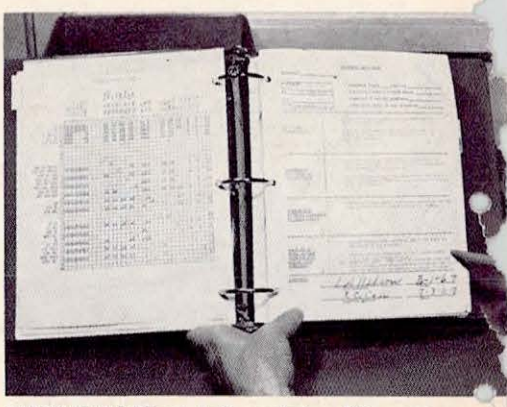
Results of this weekly improvement program have smashed all doubt about its worth. The summary of six weekly programs showed that the over-standard costs of cleanout-track movements had dropped from $70 to $1 a day, although the week's target was

DAILY INPUT for Dave Nelson, GN's Hillyard terminal manager, is a summary-of-terminal performance output of the system that Nelson himself helped to design.

PAPER BLOODHOUNDS ON THE TRAIL



PUNCHED CARDS follow freight cars through the GN yards like paper bloodhounds—not just one for every car, but one for every move of every car.



MATRIX PAGE at left contains 25 move-measurement points in Hillyard terminal; typical standard-data page (right) gives details for one move-standard.

$50. One industrial-movement CTCOS dropped from $37 to $4 a day with a target for the week of $25. Another one fell from $65 to $16 with a target of $20. (That cleanout-movement previous-week figure of $70 was a drop from $190 the week before that.)

A typical weekly action plan might read like this: "The movement concerned is local train to through train. Last week 37% of these movements were over-standard for a cost of $88 a day. The target for this week is 25% or $50. The pattern holds the same each week—on Tuesday, Friday, Saturday and Sunday the local cars are not getting out promptly. The action planned is as follows: The afternoon assistant general yardmaster will see that a list is furnished. The afternoon and night assistant generals will see that cars from downtown locals move to Hillyard properly blocked with east business, and that the Chewelah Turn is switched and lined. Watch that local time freight from the east is handled promptly."

The plan ends with the names of the men given specific responsibility for action outlined.

● **Ongoing moves: Vital data.** Much of the material on which the weekly program is based comes from the ongoing movement report. It is called that because it reports incomplete movements, compared with the three other "historic" reports which summarize completed moves. The ongoing report filters into the manager's office twice a day, at noon and midnight. It indicates which cars are in danger of going over-standard.

"The ongoing movement report is the key to the highly improved service resulting from TPC. You really can't lose a car. As a consequence you can spot trouble before the customer does," Nelson says.

● **The other reports.** In addition to the two daily ongoing movement summaries, three other, inter-related reports are printed out each day. The most compact of these is the daily summary of terminal performance (A-1). Its lines are summaries of information from the other two. It contains a one-line summary of all the possible 300 movements on each of the previous 14 days.

On the second report, performance by movement (B-1), each of the 300 movements in one day is broken down. One line here represents the total of one-movement category for one day, rather than the total of all the movements for one day. (A movement line is omitted if there were not cars over-standard in that category). It gives quick reference to move-categories in trouble.

The third report is the most detailed —cars-over-standard report (C-1). For a 24-hour period, it lists all individual movements that went over-standard. One line here represents one particular car in one particular movement. The standards on which these reports are based were determined "according to personal experience of each movement and the information we had from our former Perpetual Car Inventory system. The standard takes into account the distance, route, crew shifts, demand of customers, and a lot of other things we had experienced. Each move was cataloged with an explanation of why it should be done that way," Nelson says.

Standard data book

This catalog forms the contents of the blue-covered binder which Nelson titles "the standard data book." A typical page contains the following information: The movement described is through train to rip placement. It is designated TT-Rip P1 and coded 01-21. The standard set for this movement is eight hours, and the expected "elapsed normal range" is six to 20 hours. The expected percentage of movements within standard is 80%. Then comes a listing of the movement's route, its scheduled switches and connections, the reason for setting the standard as described: "An eight-hour standard was set to facilitate prompt repair of bad-orders." Finally there is a list of the main reasons for going over standard: Too many cars for the rip-track area and failure of the yard to get cars switched out.

● **"Bloodhound" punch-cards.** Punched cards follow every car through Hillyard like paper bloodhounds—not just one card for every car, but one card for every movement of every car. Every time a car passes a measurement point, a completed-move card is printed for it. Unless the point is departure or delivery, a new card is issued for the next movement in addition to the completed-movement card.

The first card printed out is a PCI card that comes from a tape of the consist in which the car entered Hillyard. This card forms the input bridge from the inventory system to the measurement system. After it enters the TPC system, the information on the card may be transformed into any of five different formats for the printing of the reports.

The original PCI card may become a car-performance card, a detail card used to print the C-1 cars-over-standard report. Or it may become a standard card—a card with the movement category identified and an hours-standard for that category, used to determine over-standard movements. It may become a track header card—one showing the track number to be used for producing the C-2 incomplete-move report. The card also may become a summary card with percentages and grand totals for a movement, used to produce the B-1 performance-by-movement report.

Finally it may become the A-1 report card, a manually-developed card containing totals of all movements for a day, used to print the A-1 daily summary of terminal performance.

The IBM punch-card perpetual-car-inventory system was installed at Hillyard in October 1965. It functioned as a step toward a more complete car-performance system.

"It helped. We knew how fast we were handling loads. But the yard was still full of empties, and the inventory system didn't tell us where or why," Nelson says.

"And there were no standards. We didn't know what good local performance was, or how to determine it. Our problem was an obsolete yard built many years ago, and now faced with a pile-up of cars. We were detaining cars and we didn't know why. There was congestion and we didn't know how to stop it," Nelson adds.

● **Car-count fallacy.** "The fallacy with the former car-count system was that every car entering or leaving Hillyard got the same count regardless of how many movements were involved in getting it through. A car on a through train would get as many counts as a car dropped off for an industry. But there was a great difference in cost. We might have a high movement of empties requiring a small amount of switching, and this would result in a low cost-per-car-handled. On the other hand, we might have a small number of cars needing a lot of switching, and this would result in a high cost-per-car-handled. The car-count system failed to reflect true movement-costs," Nelson explains.

The solution to the measurement problem was reached by long hours of concentration by Nelson's team, which included GN people and outside consultants. The method was to break the situation down into meaningful quantities. "There were a lot of meetings where we just sat and talked about the problem. Gradually we began to get the idea that we should look at every movement in the terminal. Before, we only thought about getting the car in and out of town, while in reality there might be many movements involved in this. We got the idea to give each movement a standard time. We must have spent a month before we came up with the system" Nelson says. ■

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TANK CAR DIVISION

GENERAL AMERICAN TRANSPORTATION CORPORATION, CHICAGO

Superintendents take sharp look at the future of ACI

This week's annual meeting, in Minneapolis, will provide a forum for discussion of a wide variety of operating problems.

Those who say there is nothing really new in railroading might find a few surprises in store at the annual meeting of the American Association of Railroad Superintendents which opens June 18 in Minneapolis.

Predictably, a number of old, familiar topics are on the agenda—such things as relationships between operating and sales/marketing people, and ways and means of improving car utilization. But AARS members will also be looking ahead to ACI, and how to make it work most effectively. They will be talking not just of yard controls but of total terminal control. They will be debating the value of the tried-and-true ratios as measures of railroad performance under today's competitive conditions.

• **Lang, Budd and Menk.** Also on the schedule are comments from three top figures in the industry—Federal Railroad Administrator A. Scheffer Lang; and Great Northern President John M. Budd and Northern Pacific President Louis W. Menk, who would be chairman and president, respectively, of Burlington Northern, had the BN merger gone through as planned May 10.

In the discussion area, one AARS committee has already generated a variety of ideas on ACI, and what it will and will not do. Committee members, headed by Missouri Pacific Trainmaster D. W. Welch, contributed their own thoughts, and the committee polled another 50 railroad officers and supervisors representing 16 carriers. The apparent consensus: From a technological standpoint, there is no lack of confidence in ACI—but the real benefits will depend on the uses management makes of ACI-generated information.

Operating officers expressed concern about "debugging" problems which may crop up in ACI's early days. They also had reservations about "the advance claiming of benefits—for instance, the estimate that car utilization can be increased by 10% by ACI. It was agreed that car utilization would indeed be increased by the use of ACI and to that extent ACI would prove most economical—but there was little if any doubt that the percentage of increase in the availability of cars depends not so much on the ACI system itself as on the uses management makes of it."

• **What about ACI?** Questions, the committee says, were raised on such subjects as:

—Management-union relationships in an ACI operation.

—Whether the industry needs a whole new per-diem setup, based on a new philosophy of car-hire and car-use.

—The quality and quantity of information railroads are exchanging, and the quality and quantity of information they should be exchanging.

—Whether ACI, among other technological innovations, will be used as a means of improving the quality of rail service, or merely as a cost-cutting device.

—Whether or not effective educational teams will be formed and maintained to provide the necessary in-service training of employees for the proper use of ACI in its various applications, or whether this vital aspect will become the responsibility of a "spur-of-the-moment" training setup in the field.

—Whether car control will be strongly centralized and closely supervised on a seven-day-a-week basis instead of being handled on a local level on a five-day, more-or-less, basis.

—Whether individual railroads will really adopt ACI on a system-wide basis.

—Whether adequate communications can be provided to reap the immediate benefits of ACI. In the survey, the committee says, "most certainly it was agreed that the industry as a whole is lacking in its over-all communications system."

—Whether an equitable basis can be set for labeling and relabeling cars.

• **The big worry.** In the main, the real ACI worries seem to be at the national-system level. Industry officers and supervisors cite the "enormous cost of constructing a national data center." They go on to raise these points:

"Assuming a national system of ACI, very real problems must be solved before optimum use could be made of it. Data on the supply side, which ACI would provide, is of little use without corollary information on demand. Accurate assessment of demand is fraught with problems both quantitative and qualitative. Imperative to solution of these problems is intra-industry cooperation, which has in the past been difficult to attain.

"Among the qualitative factors to be resolved are an effective method of control, the obtaining of accurate and honest estimates of car need from shippers and railroads, considerations related to the financial positions of the various railroads involved and considerations of the quality of equipment.

"Among the quantitative factors requiring solution are matters dealing with distribution of available cars, problems of seasonal fluctuations and levels of per diem.

"ACI can provide the railroad industry with accurate, current information on the location and movement of cars, identified by ownership, number and type. While this information will be immensely useful, it cannot of itself solve the problems of car ownership obligation or of equitable distribution. Recognition of these limitations sets the stage for realistic appreciation of ACI's contribution to industry progress.

"Any assessment of this system must be influenced to a great degree by the fact that it has received endorsement from the AAR. It would be difficult, if not impossible, to fault it from the standpoint of concept and technology.

• **Aiming for benefits.** "ACI must be viewed as a tool and not as a total system. To develop its full benefits, it must complement a computer operation. The compatibility of this raw data to computer input is exceptionally attractive. It gives us the capability of real-time reporting with decreased human effort, and the economics as well as the betterments are substantial. Its principal value lies in its ability to obtain and produce a record with a minimum of human intervention.

"ACI has worked and can be made to work in many cases at a level higher than that presently available manually on most roads. It may work better in all cases—but this will depend on factors that must be evaluated for each location, or at least for each road. Among these factors are the volume of traffic, the maintenance of equipment

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—Management-union relationships in an ACI operation.

—Whether the industry needs a whole new per-diem setup, based on a new philosophy of car-hire and car-use.

—The quality and quantity of information railroads are exchanging, and the quality and quantity of information they should be exchanging.

—Whether ACI, among other technological innovations, will be used as a means of improving the quality of rail service, or merely as a cost-cutting device.

—Whether or not effective educational teams will be formed and maintained to provide the necessary in-service training of employees for the proper use of ACI in its various applications, or whether this vital aspect will become the responsibility of a "spur-of-the-moment" training setup in the field.

—Whether car control will be strongly centralized and closely supervised on a seven-day-a-week basis instead of being handled on a local level on a five-day, more-or-less, basis.

—Whether individual railroads will really adopt ACI on a system-wide basis.

—Whether adequate communications can be provided to reap the immediate benefits of ACI. In the survey, the committee says, "most certainly it was agreed that the industry as a whole is lacking in its over-all communications system."

—Whether an equitable basis can be set for labeling and relabeling cars.

• **The big worry.** In the main, the real ACI worries seem to be at the national-system level. Industry officers and supervisors cite the "enormous cost of constructing a national data center." They go on to raise these points:

"Assuming a national system of ACI, very real problems must be solved before optimum use could be made of it. Data on the supply side, which ACI would provide, is of little use without corollary information on demand. Accurate assessment of demand is fraught with problems both quantitative and qualitative. Imperative to solution of these problems is intra-industry cooperation, which has in the past been difficult to attain.

"Among the qualitative factors to be resolved are an effective method of control, the obtaining of accurate and honest estimates of car need from shippers and railroads, considerations related to the financial positions of the various railroads involved and considerations of the quality of equipment.

"Among the quantitative factors requiring solution are matters dealing with distribution of available cars, problems of seasonal fluctuations and levels of per diem.

"ACI can provide the railroad industry with accurate, current information on the location and movement of cars, identified by ownership, number and type. While this information will be immensely useful, it cannot of itself solve the problems of car ownership obligation or of equitable distribution. Recognition of these limitations sets the stage for realistic appreciation of ACI's contribution to industry progress.

"Any assessment of this system must be influenced to a great degree by the fact that it has received endorsement from the AAR. It would be difficult, if not impossible, to fault it from the standpoint of concept and technology.

• **Aiming for benefits.** "ACI must be viewed as a tool and not as a total system. To develop its full benefits, it must complement a computer operation. The compatibility of this raw data to computer input is exceptionally attractive. It gives us the capability of real-time reporting with decreased human effort, and the economics as well as the betterments are substantial. Its principal value lies in its ability to obtain and produce a record with a minimum of human intervention.

"ACI has worked and can be made to work in many cases at a level higher than that presently available manually on most roads. It may work better in all cases—but this will depend on factors that must be evaluated for each location, or at least for each road. Among these factors are the volume of traffic, the maintenance of equipment

Superintendents will get a view of U.S. railroading from

A. SCHEFFER LANG
Federal Railroad Administrator

JOHN M. BUDD
President, Great Northern

LOUIS W. MENK
President, Northern Pacific

and labels—and considerations of how much those involved in the total operation want it to work."

The complicated relationships between technology and its uses also came up in the AARS report on terminal operations, by a committee headed by J. P. Ascher, assistant general manager, Jersey Central.

● **Total control—today.** This group arrives at a number of conclusions regarding yard efficiencies—including the observation that "total terminal control is a system that can be installed today. It has possibilities and potentials limited only by a specific railroad's ability to plan and coordinate the most efficient use of today's technology."

Thorough investigation of specific terminals, the committee says, "would provide information to develop a plan for the progressive steps which should be taken, leading toward development of a coordinated operations-control center."

Cost is always a factor, but the Superintendents' terminal planners view it this way: Many yards, "although outmoded, are indeed operated at a reasonable degree of efficiency. Under such conditions, improvements can best be realized through updating of facilities. Many other terminals, however, can be made more efficient through better management and at virtually no expense."

Discussion of performance control inevitably brings up problems of performance measurement—an area explored by a third AARS study committee, headed by H. E. Meeker, executive assistant, Western Pacific.

● **Ratios: What do they mean?** If there was any consensus coming out of this study, it was simply that the various accepted ratios are better regarded as barometers of efficiency than as real measures of efficiency.

The committee deals harshly with statistical juggling: "Probably the biggest single deficiency of the operating ratios as valid yardsticks is that they can be manipulated sometimes to produce a specific result. For example, if we say we will adjust operations during the coming year to produce an operating ratio of 75, we're putting the cart before the horse—using the ratio as a goal in itself. . . . We must have as an overriding goal the maximizing of income, not the manipulation of statistics to make ourselves look good."

Also up for debate are the cost factors which may or may not be taken into account today in performance measurement. The committee notes that "many experienced railroad officers feel that the lack of cost responsibility accounting is one of the real soft spots in management. . . . Some people feel that many cost items not now charged to operating expenses rightfully should be allocated to divisional or departmental budgets."

● **Reassigning costs.** Three specific cost items are raised:

—Car ownership costs, per diem or mileage equivalent. This "would entail charging operating divisions and shops for all time cars are in their care. It would also include charging marketing or traffic departments with car costs for cars held awaiting prospective loadings."

—Derailments. Costs "would be charged to the department responsible for the accident, operating, mechanical or maintenance-of-way."

—Freight-claim expense. This, the committee agrees, "is an extremely difficult thing to assess and apportion, but some believe it can be charged to the department or territory causing the damage."

Still another AARS group, headed by R. J. Battis, staff assistant, special projects, Elgin, Joliet & Eastern, took a broad view of "devices" aimed at improving equipment use—everything from improved car-inspection procedures to the setting up of computerized systems for operations simulation.

● **Help from the computer.** The committee also set out a half-dozen basic objectives for full car-utilization use of a computer system. Design, the report notes, should include:

—Maintenance of a constant-surveillance car inventory.

—Provision of accurate and understandable information to any required location on a real-time and exception basis.

—Provision for inquiry in which priority is based on relative importance and volume.

—Provision of sufficient data to permit exercise of over-all car-distribution control.

—Provision of detail on physical characteristics of the equipment.

—Provision of the applicable per-diem rate on each car.

A fifth Superintendents' study panel, headed by P. E. Carriere, assistant to the chairman and president, Canadian Pacific, explored various methods of service improvement, with emphasis on inter-department cooperation. The responsibility for developing service and equipment requirements, the committee says, "is not solely vested in any one particular department of a railroad organization. It should be assumed jointly by the marketing, sales and operating forces, and the closer the liaison between these and other segments of a railroad organization, the more effective the total sales program will be." ■

Skilled C&S men in short supply

Various solutions are suggested to ease the tightest market for railroad signal and communications personnel in years.

Since World War II the railroads have spent more than $2 billion to modernize their signal plants and comcunications facilities. The big question now: Who's going to take care of all this sophisticated equipment?

In the view of most observers, the railroads are now up against the tightest manpower market for skilled signal and communications men that they have been confronted with in over 14 years.

"The railroad industry is currently faced with unprecedented problems in maintaining present signal and communications manpower and recruiting replacements as older forces retire, take new jobs, or leave the services," says Milwaukee's Donald L. Wylie, assistant chief engineer for signals and communications. "There's a critical shortage of skilled men."

The problems, say communications men, involve not only recruiting and keeping skilled signal men, but also upgrading the talents of the men they have.

● **Victims of automation.** "External sources are at an all time low, and for many of us, so are our internal resources—the men now on our payrolls. We are the victims, in part, of our success in automating jobs out of existence. In most cases, field crews—the basic starting point for men—are much smaller than they were a few years ago," adds Wylie.

He says that many of the men being hired appear to be less skilled than those obtained in previous years—reflecting the greater demand—and possible opportunity (at least from their viewpoint) available elsewhere.

As for recruiting new employees to work in signal and communications departments, the most successful efforts have been in small towns and rural areas.

● **Spread the word.** When one railroad is in need of men, the word is spread to field forces, including supervisors and foremen, says Missouri Pacific's J. F. Derochie. They ask station agents in small towns to be on the lookout for promising young men. And signal and communications department employees are requested to send in names of friends and relatives who might be interested. This method of recruiting has resulted in a large number of related employees in the signal department, but this has proved to be no handicap.

Whether or not the rate structure is competitive depends almost entirely on the worker's background. If he grew up in a large city, signal department salaries are lower than the salaries he is familiar with; if he grew up in a small town or on a farm, railroad salaries are greater.

● **Seek high school graduates.** Railroads seeking signalmen want young men 18-35 years old with a high school education or equivalent. The applicant is interviewed, given aptitude and general intelligence tests as well as a physical examination. After passing these tests and being accepted for employment, he may be assigned to a signal gang. He is on probation for 60 days, after which his immediate supervisor makes a written report on his work and general attitude toward the job. If satisfactory, the new employee is advanced into the training program, which consists of eight periods of 130 days each.

● **Training textbooks.** When a new employee on the MP, for example, has completed his 60-day probationary period, he is given a set of training program texts. These books cover rules, electricity, signal systems, testing and maintenance. Examinations on these tests may be given to the employee by a signal foreman or signal supervisor at times arranged by the employee. When he has passed examinations, he is eligible for promotion to a position of signalman regardless of his seniority.

If, for any reason, the employee does not pass the examinations within the eight 130-day training periods, he is subject to dismissal from service, after a formal hearing.

"WE ARE THE VICTIMS OF OUR SUCCESS IN AUTOMATING JOBS OUT OF EXISTENCE."

DONALD L. WYLIE

A successful training method followed by several railroads is the tuition refund plan. Norfolk & Western provides employees an opportunity to enroll in various correspondence courses to further their careers. Any employee taking advantage of this plan and completing the course with a grade of "C" or better is reimbursed 100% of the cost. IC also pays a 100% tuition refund to employees passing courses with a "C" grade or better. MP pays a 50% tuition refund, whereas the Milwaukee refunds 75% of the cost of tuition and books to the employee.

The Milwaukee has a training program for men who want to advance to supervisory positions. The present program is for men working in the Chicago general office, and courses are at the junior college or college level. An eight-course curriculum has been adopted as the general minimum standard for those seeking supervisory status. Employees desiring consideration must plan on taking training that includes general engineering drawing, introduction to basic mathematics, intermediate algebra, electricity, electronics, English composition, introduction to psychology, and principles of management.

Taken at the rate of one course per semester, the eight courses can be completed in three years. Signal draftsmen are usually started on this program a few months after appointment.

Milwaukee's Wylie says that for the field forces, a correspondence course in electronics (46 lessons, 2 years) was set up. Six field supervisors are enrolled. A more comprehensive course in communications electronics (69 lessons, 37 months) "has been enthusiastically received by the men. We currently have 10 men and one supervisor enrolled. Thirty men have completed the course."

Wylie added: "We are also faced with the problems of training and upgrading supervisory forces. We are now in what might be termed 'the solid state age'. Men who are currently skilled in vacuum tube electronics must learn these new solid state skills. Those whose education stopped with mastery of direct currents must face the very real problem of whether their skills will be in demand five years hence."

For supervisors and men who have had electronics training, including an FCC first or second class radio license, Milwaukee has a special advanced course in solid state electronics (18

lessons, 12 months). Ten men have completed the course.

Possibly five years from now the railroad industry will need a much higher caliber of men for supervisors. It will not be possible to recruit them from the ranks of the technicians, they must be graduate engineers, according to C. Otis Jett, superintendent of communications, Union Pacific.

"If the technology of signaling and communications continues to advance, as it surely will, we must have highly qualified personnel. We must recruit graduate engineers, and we must create a good public image in order to compete for the technically oriented talent we require," Jett adds.

• **Holding skilled men.** Keeping trained men is also a problem, particularly with competition from other industries. It is pointed out that even railroad suppliers are head hunting. Suggestions are made that suppliers should bring talent into their business which they can spin off to the railways.

Many communications and signal officers feel that training of men is essential and a risk that has to be taken, because if they do not, they are not going to be in business.

Charles J. Chamberlain, president, Brotherhood of Railroad Signalmen, says that the "basic wage structure is pitiful. It would be difficult to attract new employees through advertisements when you have at the bottom of your ad the average rate of $3.27 per hour. . . . Wages are the basic attraction. Higher wages, therefore, would attract a better caliber of people. . . .

• **Skill is important.** "I can assure you that the BofRS is aware of the skill and knowledge required of workers in the craft and we will work to establish a training program. Skill holds a position of importance and obviously must be taken into consideration when making job assignments. Seniority alone is not the only controlling factor, we recognize that. We are ready to sit down and work out these problems," Chamberlain adds.

Wylie summed up the situation: "All of us are faced with technical obsolescence, but if we can motivate ourselves and our men to 'keep - up - with - the - times,' we can work our way out of what often appears to be an impossible train of events.

"We must be aware of the circumstances which have brought our current problems into being; the avenues open to possible solution; and the recognition that the solution must come from within the industry. We cannot substitute the will or ability of others for our own. We must play the game as it now is, while we prepare plans for the future. The future belongs to those who prepare for it." ■

WALTER TAFT

WATCHING WASHINGTON

NEW REPRIEVE FOR BARGE LINES—In the offing last week was another reprieve which will permit barge lines to continue their present commodity-mixing practices without taking on additional regulation. The ICC was expected to meet Congressional requests and postpone again the effective date of its ruling that the Interstate Commerce Act's bulk-commodity exemption is lost when barge loads are added to a tow under circumstances which result in making the assembly a mixture of bulk and non-bulk shipments.

THE EXEMPTION—The exemption is in Section 303(b). It stipulates that the Act's water-carrier regulatory provisions shall not apply to the transportation of commodities in bulk —provided the vessel's cargo space is being used for carrying not more than three such commodities, and provided that the commodities were customarily transported in bulk as of June 1, 1939.

THE ICC RULING—It was more than eight years ago that the ICC made the ruling involved. It held that all transportation performed by a vessel or tow becomes regulated if the cargo includes any regulated (non-bulk) commodities. Having thus lost their case at the Commission, and subsequently at the United States Supreme Court, the barge lines appealed to Congress.

LEGISLATION PENDING—The Commission then postponed implementation of its ruling. It was scheduled to become effective July 1 when the new reprieve (for a year) was sought by chairmen of the Senate Commerce Committee and the House Committee on Interstate & Foreign Commerce—Senator Warren G. Magnuson (D.-Wash.) and Representative Harley O. Staggers (D.-W.Va.). The requests were made when it became evident that Congress would not act on the matter this year.

THE DEREGULATION SOUGHT—The proposed legislation would emasculate the mixing rule by dropping a sentence which says that two or more vessels navigated as a unit shall be considered a single vessel. It would also qualify more bulk commodities for the exemption by eliminating the June 1, 1939, cut-off date. The proposal's failure to get through Congress has been due in no small part to the AAR's seizure of the opportunity to claim that it should be tied to extension of the bulk-commodity exemption to the railroads.

Revenues and Expenses of Railways
First Quarter Figures of Calendar Year 1968

(Dollars are stated in thousands: i.e., with last three digits omitted)

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (incl. misc.) 1968	1967	Operating Expenses: Maint. Way and Structures: Total 1968	Total 1967	Deprec. and Retirements	Maint. Equipment: Total 1968	Total 1967	Deprec. and Retirements	Traffic	Transportation	Total 1968	Total 1967	Operating ratio 1968	1967	Net from railway operation	Railway tax accruals	Net Railway operating income 1968	1967
Akron, Canton & Youngstown	3 mos.	171	1,949	—	2,006	1,683	232	208	19	401	329	144	116	708	1,568	1,399	78.2	83.1	438	218	319	269
Ann Arbor	3 mos.	293	2,249	—	2,276	2,020	234	207	21	443	415	141	53	1,153	1,946	1,794	85.5	88.8	330	181	—22	—92
Atchison, Topeka & Santa Fe	3 mos.	12,892	149,151	5,053	163,920	160,126	23,551	22,632	2,499	36,628	36,406	11,097	4,659	62,299	134,891	134,808	82.3	84.2	29,029	15,215	12,046	9,791
Atlantic Coast Line	3 mos.		See Seaboard Coast Line																			
Baltimore & Ohio	3 mos.	5,748	95,091	1,050	101,102	101,630	11,398	10,400	1,564	16,925	17,310	2 602	2,781	41,598	78,936	77,204	78.0	76.0	22,166	6,716	—11	4,165
Bangor & Aroostook	3 mos.	543	3,561	59	3,669	4,110	826	823	67	1,117	1,205	421	89	1,310	3,587	3,660	97.8	89.0	83	307	154	581
Bessemer & Lake Erie	3 mos.	201	5,771	—	6,066	4,816	883	813	130	1,189	1,332	10	158	1,910	4,745	4,453	78.2	92.5	1,321	1,314	652	501
Boston & Maine	3 mos.	1,528	13,717	1,164	15,891	15,904	2,247	2,041	413	2,661	2,252	637	342	7,721	13,880	12,680	87.3	79.7	2,011	1,250	—1,050	528
CPR Lines in Maine	3 mos.	234	1,825	34	1,904	2,218	328	296	60	308	357	46	49	558	1,357	1,410	71.3	63.6	546	76	156	379
Central of Georgia	3 mos.	1,729	11,819	259	12,363	11,396	2,417	2,293	167	2,652	2,267	774	320	4,816	10,938	10,928	89 0	95.9	1,365	338	231	—473
Central RR of New Jersey	3 mos.	594	9,397	863	12,033	11.968	1,463	1,503	295	2,142	2.295	438	325	6,165	11,198	11,792	93.1	98.5	835	1,133	—1,851	—2,282
Central Vermont	3 mos.	382	1,852	—	1,947	2,081	464	469	53	320	274	13	35	859	1,754	1,751	98.1	84.1	153	174	—262	—76
Chesapeake & Ohio	3 mos.	5,128	88,464	800	92,868	93,857	10,200	10,100	1,511	19,268	19,653	6,669	2,620	38.392	76.187	76.509	82.0	81.5	16,682	9,115	9,871	9,988
Chicago & Eastern Illinois	3 mos.	862	10,724	106	11,248	9,575	1,498	1,664	118	2,433	1,878	566	410	4,306	9,355	8,677	83.2	90.6	1,892	832	—683	—822
Chicago & Illinois Midland	3 mos.	121	1,193	—	1,236	1,537	119	99	22	207	228	36	7	361	818	961	66.2	62.5	418	246	129	179
Chicago & North Western	3 mos.	10,166	52,371	5,012	59,778	57,193	8,237	8,496	1,380	10,565	10,291	3,691	2,052	26,038	51,089	48,794	85.5	85.3	3,689	5.015	553	—1,983
Chicago, Burlington & Quincy	3 mos.	8,536	58,216	3,426	66,945	68,764	8,687	8,225	1,428	12,759	12,879	4,309	2,292	27,613	55,452	56,437	82.8	82.1	11,492	5.544	3.686	4,146
Chicago Great Western	3 mos.	1,411	7,072	1	7,335	7,530	828	965	118	1,326	1,331	406	381	2,699	5,566	5,667	75.9	75.3	1,769	627	341	263
Chic., Milw., St. Paul & Pacific	3 mos.	10,511	57,173	2,346	64,497	61,952	7,737	7,382	1,323	10,344	9.994	3,361	1,796	28,154	52,296	50,147	81.1	80.9	12,201	5,621	2 212	2,029
Chicago, Rock Island & Pacific	3 mos.	7,278	53,798	1,718	58,575	57,393	7,867	7,750	1,197	10,234	10,225	2,201	1,602	25,317	48,239	47,608	82.4	83.0	10,336	4,612	—1.529	—912
Clinchfield	3 mos.	306	7,562	—	7,606	7,439	788	807	68	1,162	1,187	597	242	2,187	4,622	4,454	60.8	59.9	2,984	714	2,339	2,357
Colorado & Southern	3 mos.	708	3,678	15	3,759	3,715	373	519	48	721	758	319	66	1,218	2,604	3 393	69.3	91.3	1,155	400	747	124
Ft. Worth & Denver	3 mos.	1,280	5,443	—22	5,604	5,005	621	681	81	593	779	145	193	1,929	3 686	4,381	65.8	87.6	1,918	243	911	—288
Delaware & Hudson	3 mos.	734	9,889	142	10,275	10,662	1,200	1,121	186	2,180	2,560	592	344	3,777	8,252	8 591	80 3	80 6	2,024	1 275	861	783
Denver & Rio Grande Western	3 mos.	2,153	21,231	362	21,847	21,760	2,198	2,236	318	3,624	3 578	1,297	822	7,338	15,368	15 325	70.3	70.4	6,479	2 999	3,761	3 323
Detroit & Toledo Shore Line	3 mos.	50	1,636	—	1,701	1,855	151	146	13	261	255	112	65	606	1,180	1,214	69.3	65.4	521	158	136	192
Detroit, Toledo & Ironton	3 mos.	467	7,475	—	7,797	6,544	595	499	84	1,553	1,335	667	219	2,676	5,389	4,623	69.1	70.6	2,409	537	1.202	949
Duluth, Missabe & Iron Range	3 mos.	511	2,765	—	2,897	1,933	1,127	1,054	267	1,317	1,393	538	52	1,613	4,898	4,731	169.0	244.8	—2,000	Cr.651	—970	—1,470
Duluth, Winnipeg & Eastern	3 mos.	174	2,673	—	2,698	2,100	222	232	16	217	143	2	41	785	1,323	1,183	49.0	56.3	1,375	422	537	405
Elgin, Joliet & Eastern	3 mos.	205	10,000	—	14,486	12,391	1,125	1,530	104	2,549	2,099	412	158	5,297	10,478	9,561	72.3	77.2	4,008	2,090	987	637
Erie Lackawanna	3 mos.	2,905	50,404	2,621	57,934	54,129	6,186	5,658	1,108	11,217	9,837	2,457	1,274	28,717	50,315	45,297	86.9	83.7	7,619	5,037	—3,084	256
Florida East Coast	3 mos.	571	6,545	9	6,684	6,681	1,446	1,340	169	1,291	1,016	340	164	1,674	4,958	5,003	74.2	74.9	1,726	849	85	9
Georgia Railroad	3 mos.	331	2,077	18	2,267	2,554	359	328	44	417	429	102	145	909	1,981	2,021	87.4	79.1	286	143	—22	307
Grand Trunk Western	3 mos.	946	15,780	430	17,322	15.555	1,754	2,043	178	2,535	2.704	193	376	8,258	13,941	13,834	80 5	89.3	3,381	1,609	—1,179	—2,931
Great Northern	3 mos.	8,282	55,974	1,621	61,126	60,806	8,407	8,706	1,096	10,919	10,859	3,512	1,890	25,492	51,059	49,803	83.5	81.9	10,067	6,317	3,166	3,167
Gulf, Mobile & Ohio	3 mos.	2,734	22,007	436	23,710	23,305	2,954	2,838	255	4,534	4,551	1,325	861	8,046	17,406	17,098	73.4	73.4	6,304	1,909	2,679	2,662
Illinois Central	3 mos.	6,714	64,680	5,304	74,173	73,165	9,873	9,622	1,354	13,461	13,115	3,891	2,181	30,174	60,792	58,526	82.0	80.0	13,382	7,029	2,216	3,853
Illinois Terminal	3 mos.	340	2,152	—	2,385	2,382	318	250	11	456	407	113	132	989	2,064	1,909	86.5	80.1	321	212	—202	29
Kansas City Southern	3 mos.	894	11,162	199	12,400	11,729	1,298	934	171	2,153	1,894	773	368	4,239	8,556	7,707	69.0	65.7	3,843	1,000	1,830	1,727
Lake Superior & Ishpeming	3 mos.	103	167	—	232	224	252	280	76	352	367	191	9	287	1,011	1,002	436.2	447.6	—779	160	—899	—[illegible]
Lehigh Valley	3 mos.	956	10,938	—	11,343	11,278	1,445	1,456	260	1,598	1,590	348	404	6,016	10,214	10,085	90.0	89.4	1,130	1,008	—1,488	—975
Long Island	3 mos.	322	2,249	17,795	20,850	19,648	2,618	3,396	281	5,115	4,370	614	201	12,182	21,322	20,090	102.3	102.2	—472	1,417	—2,795	—2,610

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Louisiana & Arkansas	3 mos. 746	6,785	121	7,298	6,705	814	673	75	1,120	1,077	424	301	2,571	5,110	4,839	70.0	72.2	2,188	802	824	667
Louisville & Nashville	3 mos. 5,571	70,027	694	73,494	71,701	9,596	8,997	1,152	15,802	14,957	6,784	1,827	28,630	53,959	57,259	81.6	79.9	13,535	5,352	6,609	7,783
Maine Central	3 mos. 921	6,050	1	6,215	6,376	1,076	1,167	86	1,230	1,235	296	113	2,217	5,012	5,137	80.7	80.6	1,203	433	443	516
M-K-T Lines	3 mos. 2,789	16,026	—	16,522	13,590	2,216	2,323	282	1,946	2,037	488	734	5,959	11,568	11,122	70.0	81.8	4,954	1,235	719	—592
Missouri-Illinois	3 mos. 444	1,744	—	1,766	1,602	116	117	12	576	477	335	37	360	1,160	1,086	65.7	67.8	606	274	1,128	912
Missouri Pacific	3 mos. 9,041	72,187	659	78,042	78,344	11,035	10,965	1,161	12,823	13,277	3,497	1,940	27,553	57,399	57,117	73.6	72.9	20,643	6,340	7,102	8,260
Monon	3 mos. 540	4,898	—	5,108	4,863	562	541	65	798	809	219	227	1,909	3,857	3,854	75.5	79.3	1,251	399	414	313
Monongahela	3 mos. 167	1,655	—	1,667	1,650	241	195	34	159	146	27	3	469	901	943	54.1	57.1	766	183	194	239
New York Central	See Penn Central																				
Pittsburgh & Lake Erie	3 mos. 209	7,796	18	8,440	7,035	977	839	166	2,489	3,126	1,246	254	3,420	7,796	7,815	92.4	111.1	644	1,952	2,796	2,182
New York, New Haven & Hartford	3 mos. 1,503	15,668	8,915	29,725	30,397	4,601	4,651	939	6,169	6,276	1,317	609	16,806	30,476	29,924	102.5	98.4	—751	2,820	—6,852	—5,728
Norfolk & Western	3 mos. 7,583	148,011	614	154,765	148,122	14,672	14,057	2,281	24,766	23,675	10,519	3,172	58,279	108,149	102,494	69.9	69.2	46,616	14,894	24,605	25,067
Norfolk Southern	3 mos. 624	2,668	—	2,739	2,597	423	452	70	423	442	178	148	857	2,102	2,111	76.7	81.3	638	211	240	128
Northern Pacific	3 mos. 6,784	44,106	969	47,320	45,114	6,148	6,247	1,330	9,510	10,107	3,182	1,523	20,758	42,118	41,913	89.0	92.9	5,202	5,435	905	60
Northwestern Pacific	3 mos. 324	2,388	2	2,398	1,991	504	827	65	99	133	3	20	761	1,462	1,777	61.0	89.1	936	220	174	—374
Penn Central	3 mos. 19,177	318,796	25,499	382,181	370,503	40,326	39,129	7,525	64,886	66,066	16,374	7,127	182,510	316,224	310,886	82.7	83.9	65,957	27,315	—2,932	—2,471
Penn-Reading Seashore Lines	3 mos. 322	1,813	22	1,974	1,958	425	372	77	388	374	74	14	1,354	2,289	2,228	115.9	113.8	—316	156	—957	—845
Piedmont & Northern	3 mos. 150	1,625	—	1,678	1,671	155	162	20	117	115	31	108	383	913	913	54.4	54.6	765	330	244	247
Reading	3 mos. 1,231	21,978	1,779	26,442	25,945	3,666	3,267	586	5,097	5,177	1,682	663	11,503	22,707	22,049	85.9	85.0	3,735	2,160	371	121
Richmond, Fred. & Potomac	3 mos. 118	4,361	958	6,140	6,647	529	527	99	871	888	262	94	2,158	4,131	4,387	67.3	66.0	2,009	1,135	699	825
St. Louis-San Francisco	3 mos. 4,577	36,814	—	38,204	36,077	5,441	4,951	648	5,563	5,286	2,016	1,352	13,724	28,279	27,091	74.0	75.1	9,925	3,973	4,320	3,811
St. Louis Southwestern	3 mos. 1,565	25,143	—	25,462	24,104	1,933	1,801	215	3,892	3,532	2,167	672	8,032	15,285	14,530	60.0	60.3	10,177	2,942	7,724	6,451
Savannah & Atlanta	3 mos. 167	1,154	—	1,191	1,205	208	156	6	156	184	81	33	341	824	816	69.2	67.6	367	215	200	236
Seaboard Coast Line	3 mos. 9,306	96,172	6,210	107,874	109,679	13,899	12,842	1,304	19,673	19,385	6,342	3,534	41,419	84,772	82,181	78.6	74.9	23,102	7,775	7,235	10,890
Soo Line	3 mos. 4,675	21,976	3	22,410	20,629	2,801	3,164	319	3,050	3,221	873	727	8,809	16,482	17,109	73.5	82.9	5,928	1,990	2,564	111
Southern Railway	3 mos. 6,085	78,810	997	83,101	78,370	9,333	8,189	1,046	14,389	13,355	4,457	2,051	27,010	57,491	54,021	69.2	68.9	25,609	8,439	11,448	10,629
Alabama Great Southern	3 mos. 327	5,146	64	5,612	5,076	689	593	114	1,022	1,009	333	129	1,890	4,007	3,745	71.4	73.8	1,605	376	822	480
Cinn., New Orleans & Tex. Pac.	3 mos. 337	11,329	68	11,965	10,186	1,236	1,053	226	2,556	2,659	965	290	3,474	8,116	7,816	67.8	76.7	3,848	1,276	2,678	1,694
Georgia Southern and Florida	3 mos. 395	3,623	5	3,698	2,540	578	471	41	190	177	26	68	908	1,883	1,622	50.9	63.9	1,815	398	346	14
New Orleans and Northeastern	3 mos. 203	3,080	58	3,335	2,953	443	463	103	685	662	277	76	1,145	2,559	2,382	76.7	80.5	776	349	320	239
Southern Pacific	3 mos. 11,764	189,858	2,833	199,818	197,354	22,096	21,709	2,555	39,085	39,412	13,600	3,342	78,652	154,963	153,716	77.6	77.9	44,855	18,733	16,144	15,126
Spokane, Portland & Seattle	3 mos. 922	9,438	131	10,153	9,318	1,488	1,427	181	1,522	1,552	390	130	3,998	7,605	7,297	74.9	78.3	2,548	880	997	475
Texas & Pacific	3 mos. 2,016	17,033	121	18,741	18,293	2,805	2,537	319	3,542	3,334	1,213	659	7,307	15,215	14,445	81.2	79.0	3,526	1,006	1,144	1,200
Toledo, Peoria & Western	3 mos. 239	1,926	—	2,104	2,092	201	203	20	199	177	49	171	740	1,482	1,469	70.4	70.2	622	205	182	127
Union Pacific	3 mos. 9,489	130,023	2,742	139,738	136,351	16,902	14,971	1,577	27,134	27,140	11,910	3,642	52,280	108,112	103,713	77.4	76.1	31,627	15,708	16,578	15,684
Western Maryland	3 mos. 866	11,894	—	12,517	12,594	1,861	1,799	180	3,329	2,953	940	434	4,562	10,901	10,374	87.1	82.4	1,616	1,099	1,723	1,810
Western Pacific	3 mos. 1,176	14,783	339	15,412	14,986	2,023	1,849	290	2,813	2,772	969	860	5,720	12,792	12,247	83.0	81.7	2,620	910	1,233	1,164

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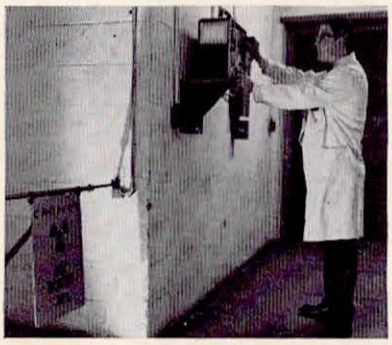

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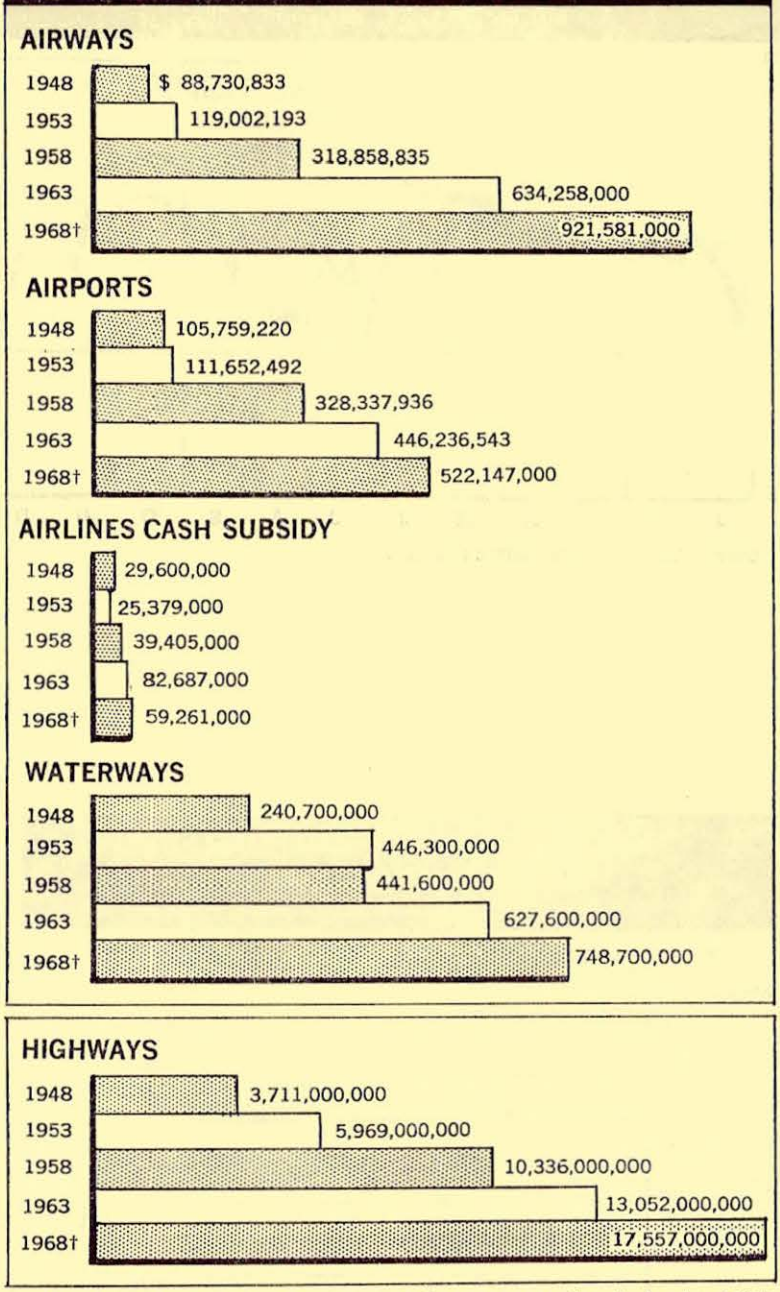
GOVERNMENT EXPENDITURES FOR HIGHWAY, WATERWAY AND AIR FACILITIES*



*By federal, state and local governments (there were no outlays by local and state governments, however, for airways and airlines cash subsidies).
Source: Economics and Finance Dept., AAR.

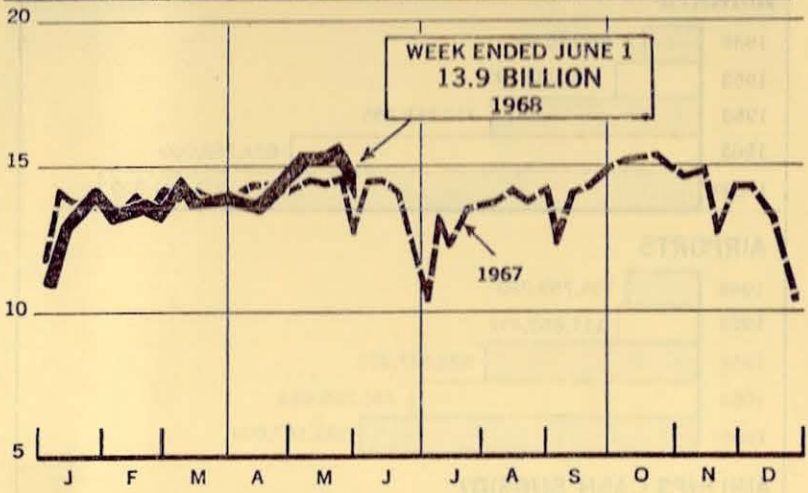
†Estimated.

Current statistics

Carloadings, revenue freight	
23 wks., 1968	12,262,219
23 wks., 1967	12,360,675
New freight cars on order	
May 1, 1968	20,364
May 1, 1967	34,960
New freight cars delivered	
4 mos., 1968	21,953
4 mos., 1967	32,785
Serviceable cars	
May 1, 1968	1,398,772
May 1, 1967	1,422,886

RAIL FREIGHT TRAFFIC TRENDS

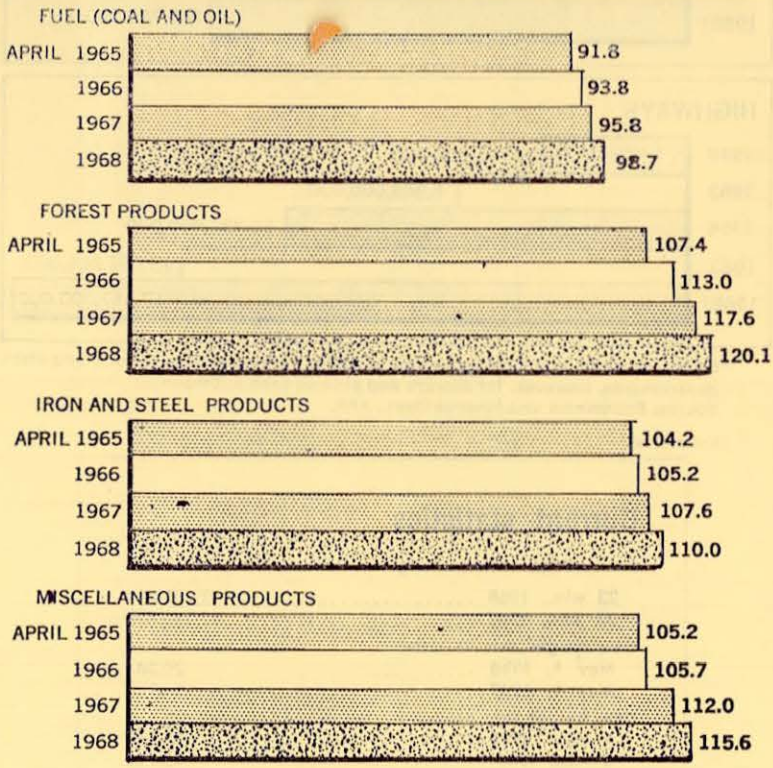
BILLION TON-MILES (Estimated)



Source: Association of American Railroads

INDEX OF PRICES OF RAILROAD FUEL, MATERIAL AND SUPPLIES*

(CLASS I RAILROADS)



*Based on prices as of first day of month shown. Average 1957-59 equals 100.
Source: Economics and Finance Dept., AAR.

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended June 8 totaled 585,114 cars, the Association of American Railroads announced on June 13. This was an increase of 57,086 cars, or 10.8%, compared with the previous week; an increase of 7,889 cars, or 1.4%, compared with the corresponding week last year; and a decrease of 36,041 cars, or 5.8%, compared with the equivalent 1966 week. Ton-miles generated by carloadings in the week ended June 8 are estimated at 15.4 billion, an increase of 5.5% above the corresponding week of 1967, and 0.1% above the 1966 week.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, June 8

District	1968	1967	1966
Eastern, including Allegheny and Pocahontas ..	240,306	231,069	249,266
Southern	122,241	115,982	113,312
Total Eastern and Southern Districts	362,547	347,051	362,578
Northwestern .	77,208	80,421	95,256
Central Western	106,327	110,272	121,696
Southwestern .	39,032	39,481	41,625
Total Western Districts	222,567	230,174	258,577
Total All Roads	585,114	577,225	621,155
Commodities:			
Grain and Grain Products	36,051	45,268	57,760
Livestock	1,289	1,052	1,390
Coal	112,378	118,396	121,220
Coke	8,532	7,565	8,678
Forest Products	41,252	41,363	40,346
Ore	56,514	55,094	62,397
Merchandise l.c.l.	3,718	4,764	6,281
Miscellaneous .	325,380	303,723	323,083
June 8	585,114	577,225	621,155
June 1	528,028	508,845	547,685
May 25	589,217	573,428	611,744
May 18.....	580,603	571,343	609,325
May 11	575,544	575,596	611,161
Cumulative total, 23 weeks	12,262,219	12,360,675	12,822,167
Estimated revenue ton-miles (billions) 23 weeks ...	330.4	319.8	323.3

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended June 1 totaled 22,821 cars, carrying 37,280 trailers, compared with 20,587 cars, carrying 33,498 trailers, in the corresponding 1967 week. Loadings for 1968 up to June 1 totaled 545,193 cars, carrying 882,141 trailers, compared with 492,090 cars, carrying 809,329 trailers, in the corresponding period of 1967.

IN CANADA

Carloadings for the seven-day period ended May 21 totaled 71,011 cars, compared with 78,201 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd. from Connections
Totals for Canada		
May 21, 1968	71,011	25,514
May 21, 1967	81,661	25,123
Cumulative Totals		
May 21, 1968	1,389,592	491,316
May 21, 1967	1,424,633	505,570

FREIGHT TRAIN CARS

• *U.S. Army Mobility Equipment Command.*—Has ordered ten 140-ton-capacity depressed center flat cars with one-piece cast steel underframes from General Steel Industries. The cars will be built by GSI's Castings Division, Granite City, Ill.

• *May bad order ratio is higher.*—Class I roads on May 1 owned 1,475,816 freight cars, 23,065 less than on May 1, 1967, according to AAR report summarized below. Bad order ratio was 0.1% higher than on May 1, 1967.

	May 1, 1968	May 1, 1967	Change
Car ownership	1,475,816	1,498,881	−23,065
Waiting repair	77,044	75,995	+ 1,049
Repair ratio	5.2%	5.1%	+ 0.1%

PASSENGER TRAIN CARS

• *Canadian Pacific.* — Ordered nine 85-ft, stainless-steel, double-deck passenger cars from Canadian Vickers at a cost of $2.8 million. The order includes seven trailer cars each with a seating capacity of 168 persons, and two control cars each with a capacity of 156. The cars, to be used in push-pull service in Montreal area suburan service, will be delivered in June 1969.

NEW FACILITIES

• *Penn Central.*— Ordered 404 Hevi-Car Kits from the Signal & Communications Division of WABCO to modify and upgrade retarder equipment at Conway Yard.

• *Seaboard Coast Line.*—Ordered 60 radio units for installation on locomotives and cabooses, and 20 battery-powered Carryphones for road train service, from Signal & Communications Division of WABCO.

• *Texas & Pacific.*—Plans to construct 28.8 miles of lead track from its main line near San Martine, Reeves County, Tex., to the Elcor Chemical Corp. plant in Culberson and Reeves counties, Tex. Estimated cost of construction is $3.5 million. T&P will provide rail service for Elcor's new sulphur extracting plant.

MAINTENANCE EXPENDITURES

• *First quarter of 1968 up 2.6% above first quarter of 1967.* —Expenditures by Class I roads for maintenance of equipment, way and structures in the first quarter of 1968 were up about $15.8 million, compared with the first quarter of 1967, according to AAR Economics & Finance Department, summarized below:

	First Quarter 1968	1967	% Change
Maintenance of way and structures	$316,618,298	$305,723,873	+3.6
Maintenance of equipment	478,217,601	473,355,707	+1.0
Totals	794,835,899	779,079,580	+2.6

YOU OUGHT TO KNOW

RPI posts dates for freight car contest

Deadline for registration of intent to enter this year's Golden Freight Car Competition is June 24, the Railway Progress Institute has announced. Deadline for mailing completed entries, with supporting exhibits, is July 31. This year, for the first time, the RPI will award Silver Freight Cars in addition to the Golden Freight Car, the top prize in the contest. The Silver Freight Cars will replace awards of merit presented in previous years. Winning railroads will receive the awards at the RPI's 60th annual dinner scheduled for the Sheraton-Park Hotel, Washington, D.C., October 24.

Decision is due from the ICC on rate-hike case

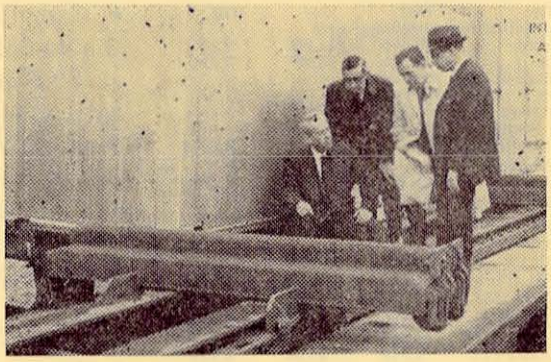
The railroads' Ex-Parte 259 rate-increase case is before the ICC for decision. It reached that stage when two days of oral argument were concluded last week. As presented in a tariff now published to become effective June 24, the proposed increases would yield $460 million a year. The Commission could let the tariff become effective or suspend it in whole or in part.

Saunders proposes national rail passenger council

A National Railroad Passenger Council devoted to trying to solve the industry's passenger service problem has been proposed by Penn Central Chairman Stuart T. Saunders. He said the group should be made up of members representing the public, railroads and governmental transportation agencies. His recommendation was made "either as a corollary or an alternative to a Congressional review" requested by the ICC.

Some sunshine and a little rain on N&W-C&O merger

The Norfolk & Western and the Chesapeake & Ohio /Baltimore & Ohio weathered some good and bad elements in their merger campaign last week. The good: The Justice Department made the surprising announcement that the proposed merger would not be objectionable from the standpoint of public interest, and the State of New Jersey announced that it was supporting the merger. The bad: New York State said it plans to vigorously oppose the consolidation. Justice's position, filed with the ICC, asked that the Commission retain jurisdiction over the proposed merger for 10 years for several reasons. One was that it would give the Commission time to decide whether N&W-C&O should give up the so-called "Wabash" lines west of the Mississippi.



Containerization: Wisconsin to Australia

Australia needs tractor parts, Racine, Wis., supplies them—via truck-rail-ship containerized movement. G. F. Blankinship, Jr., Illinois Central's manager-international sales (left) explains the operation to H. C. Busch, executive general agent for the Port of New Orleans at Chicago; J. N. Kelly, Great Lakes area manager for Farrell Lines, Inc.; and IC President W. B. Johnson, as the three 8x8x20 containers were side-loaded onto a flat car at IC's South Water Street yards, Chicago. Steadman Industries, Inc., of Toronto, built the containers as well as the special transfer units used in the side-loading operation from highway chassis to flat car. Containers were provided by Interpool, Inc., a subsidiary of REA Express, under lease to Farrell Lines. According to IC, this movement "is believed to be the first side-loaded shipment of containers to be forwarded from Chicago via New Orleans for Australia."

C. J. Hurst
P-S

R. J. Gorski
P-S

Arthur A. Frank, Jr.
Stanray

R. N. Corning, Jr.
Stanray

SUPPLY TRADE

C. J. Hurst has been named vice president, field sales, and **R. J. Gorski,** vice president, industrial relations, **Pullman-Standard Division** of **Pullman Incorporated.** Mr. Hurst was previously manager, field sales, Chicago, and Mr. Gorski was director of industrial relations.

Arthur A. Frank, Jr. and **Ralph N. Corning, Jr.** have been elected vice presidents, **Stanray Corp.** Mr. Frank was formerly general manager of Stanray's **Standard Railway Equipment Division.**

Frank W. Soper, Sr., assistant manager-railroad sales, **CF&I Steel Corp.,** retired May 31 after more than 40 years of service.

Richard J. Housman has been elected vice president-engineering, **Cardwell Westinghouse Co.,** Chicago.

Lloyd Cardwell, vice president-research and engineering, **Cardwell Westinghouse Co.,** Chicago, retired May 31 after more than 23 years' service.

Fansteel Inc.'s Rectifier Products has named **Modern Industries Incorporated,** Fairdale, Ky., as United States distributor for Fansteel's railroad signal products. Fansteel is located in North Chicago, Ill.

John M. Parker has been appointed manager of the order and pricing department, **Railroad and Transit Division, Vapor Corp.,** succeeding **V. T. Borst,** retired. **H. J. Schickedanz** has been appointed general manager of Vapor's **International Division.**

P. Taylor Bryan III has been appointed to the newly created position of assistant to the president, **St. Louis Car Division, General Steel Industries, Inc.,** St. Louis. Mr. Bryan was previously assistant vice president-sales at the Division. **William W. Sant** has been named manager of employee relations, **GSI.** He was formerly manager of industrial relations, **Union Electric Co.**

Burnett Bartley has been elected a vice president of **Koppers Co.,** Pittsburgh, Pa., and named general manager, Forest Products Division. He has been vice president and marketing manager of the division since 1966.

C. Eugene Hart has been named manager, Transportation Equipment Products Operation, **General Electric Co.,** Erie, Pa., succeeding **James R. Olin,** recently appointed manager—business planning, Industry Control Department, Roanoke, Va. In his new position Mr. Hart will be responsible for the engineering and manufacturing of electrical propulsion and automation equipment and components for railroads and for metropolitan and inter-city transportation.

Ralph H. Rawson, sales engineer, New York Office, has been appointed district engineer, Eastern Transportation Sales District. **Frederick L. Durand** has been appointed transportation sales engineer, Philadelphia.

Ronald C. Bryant has been appointed manager of the newly created transportation air conditioning department, **Trane Co.,** La Crosse, Wisc., with responsibility for bus and rapid transit air conditioning. **Dan F. Jones** has been named manager, transportation refrigeration department, with responsibility for truck-trailer and rail car refrigeration sales.

R. E. Canzoniero has been appointed manager of railway carrier accounts, **Integrated Container Service, Inc.,** New York. Since 1961 Mr. Canzoniero has been manager, Eastern Region, R.E.A. Leasing Corp. (REALCO).

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These charts are very helpful to AAR billing clerks, mechanical engineers, purchasing and stores personnel, car inspectors, write-up men, car foremen, and anyone else who needs a knowledge of car parts and their relation to each other.

The charts include a cutaway diagram of the car and a listing of important parts with arrows showing where each is located. These charts are a part of standard training programs used on a number of major railroads.

$2 each

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- ☐ **Tank Car (22x35 inches)**
- ☐ **Refrigerator Car, wood sheathed, steel underframe, 1920 design (14x20 inches)**

6/17/68

Name _____

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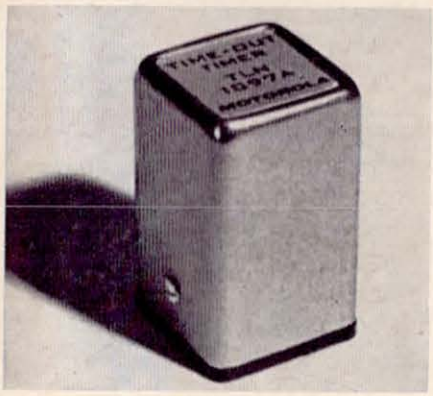
_____ **RR** _____

NEW PRODUCTS REPORT

Optical scanner (RA-1)

A new optical character scanning system reads both hand- and machine-printed characters and transfers the data directly to magnetic tape for input to computers. The OpScan 288 consists of two units. One transports the documents, scans them, and then stacks them. The other unit contains the logic circuitry needed to put data from the documents onto magnetic tape. Basic reader scans single line documents. With a special option, however, the OpScan 288 can also read two and three lines on each document at reduced speeds. Single-line documents are read at 600 per min, two-line documents at 300 per min, and three-line documents at 200 per min. All characters are recorded on seven channel magnetic tape.

The OpScan 288 is compatible with all major computer series. Among those it can work in conjunction with are: Honeywell 200, IBM 360, IBM 1401, NCR 315 and RCA Spectra 70. *Optical Scanning Corp.*



Radio timer (RA-2)

A timer has been developed for mobile 2-way radio that automatically limits every continuous transmission to one minute. When the minute is up, the timer cuts off the transmitter's power and sounds an alerting tone in the mobile speaker. When the mike button is released, the transmitter is instantly reset for normal operation.

No longer is it possible to lock up a repeater or a channel by inadvertent, prolonged keying of a transmitter. The Time-out-Timer is available on all low band, high band and UHF "Motrac" and "Motran" units, as well as base stations.

When a transmission must be longer than a minute, the driver simply releases the button when he hears the alerting tone—then presses it again, a moment later, and continues talking. In most models, the timed period can be made as long as 3 min or as short as 30 sec. For maximum reliability, circuits determine the time-out period; no electric motor is used. *Motorola.*

Storage battery (RA-3)

A new line of nickel-cadmium storage batteries in transparent plastic cases features a Cliplock multi-cell assembly system that eliminates the usual wood traying. It is so flexible that any standard cell assembly can be readily altered in the field. This storage battery in a plastic case has an internally connected ground under the cover that permits use of an automatic electric battery filler. Case and cover are moulded from a high impact plastic.

The Edison nickel-cadmium storage battery has an extremely narrow voltage band; the ability to withstand deep discharges without loss of capacity or internal damage; low internal resistance that means higher available discharge rates; low water consumption; and excellent low temperature performance characteristics.

Four models are available: ED-80 (80 a.h.), ED-120 (120 a.h.), ED-160 (160 a.h.) and the ED-240 (240 a.h.). All models are sized to fit any standard railway signaling housing. *Thomas A. Edison Industries.*

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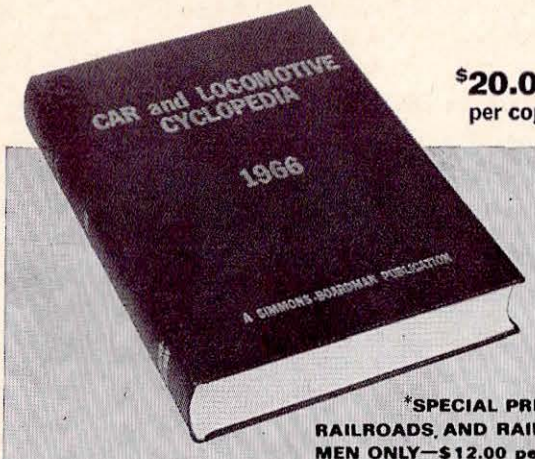

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VIEWPOINT

Public relations—no field for the fainthearted

Railroad public relations can be a thankless, frustrating, sometimes dangerous line of work. Top management, it is said, does not always know what it wants, and middle management tends to ignore the PR aspects in its preoccupation with running the railroad. On the outside, PR men face a multitude of publics, each with some special interest—and all, at one time or another, showing resistance to moves which railroads must make, or chose to make.

PR men themselves have been subject to some disdainful opinion—that they have succumbed to the "system," that they are just going along for the ride, that they are losing their spark. Last week, however, it would have been hard to make a case either for management's neglect of PR or for the PR man's own lack of enthusiasm. Public relations officers from most major roads got together for three days of talking and listening—and their rejection of defeatism, in their own ranks or from program speakers, was something to behold. At the same time, the PR operation got a strong boost from the top, from Southern Pacific's president and chief executive officer, B. F. Biaggini.

He talked of opportunities: "The field is wide open, and we look to you to give your imagination and your ingenuity free scope in exploring all the possibilities." He also talked of responsibilities—in terms that deserve to be tacked up on the wall for all to see.

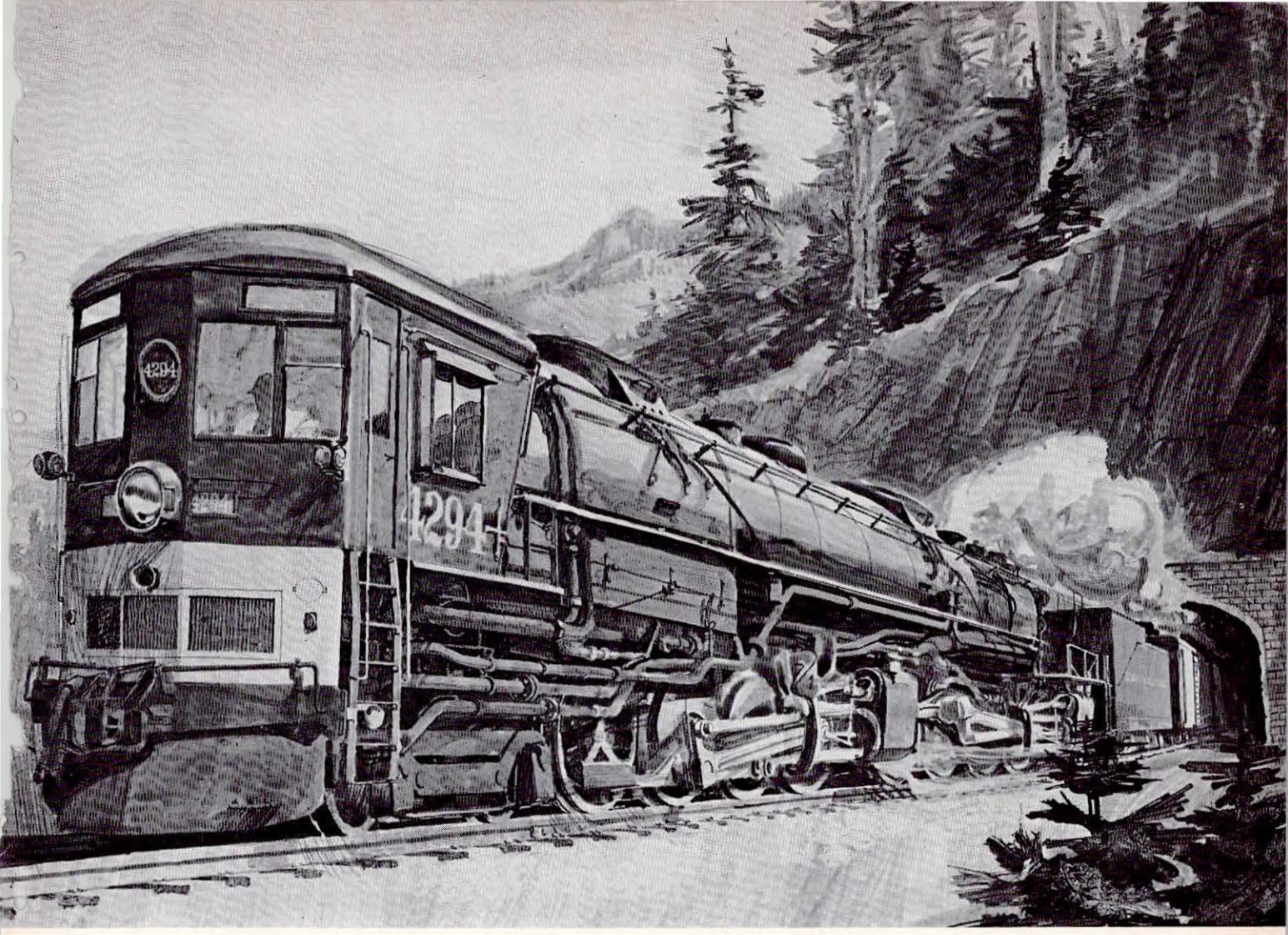
SP's president didn't waste time with the obvious. But he did remind the PR men that their policies, like those of any department, must be realistically related to the facts of life for top management—the success and profitability of the enterprise for both the long and short range period. He did urge PR to develop day-to-day working relationships with all other departments. He did stress the "feedback" nature of the PR job, in its role of keeping management informed of trends on the outside. And he opened up a couple of areas that have been, in the past, somewhat gray.

EMPLOYEE EDUCATION GETS A PRIORITY

Biaggini made it clear, for instance, that he thinks a better job can be done in informing employees of what a company or the industry is trying to accomplish, and why. And finally, he put the PR function squarely into the policy picture. "If you are doing your job adequately," SP's chief executive officer declared, "you will not hesitate to be the devil's advocate to your top management—speaking on behalf of public opinion to challenge things your company is doing or plans to do. Sometimes your recommendations may not prevail in competition with other management considerations, but this in no way relieves you of fighting for what you think is right."

This is strong stuff. It reaffirms the point that railroad public relations is no field for the fainthearted. It also reaffirms top management's hopes for the present and future role of PR in the over-all operation.

Sometimes it seems that railroads have more public-relating problems than all other industries combined. And even if that impression is not strictly accurate, it is still true that the PR effort—today and even more so tomorrow—can be nothing less than the best.



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